

# Municipal Journal

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IMPROVEMENTS  
AT

### LOS ANGELES

A PLAN for the improvement and beautifying of Los Angeles, Cal., has been prepared by Charles Mulford Robinson, which is typical of what may be done for many cities which have grown up without any intelligent plans of which this idea has formed an element.

The plan for Los Angeles may be divided into three parts: A grand boulevard connecting the railroad station with the heart of the city, about a mile long and 192 feet wide. Almost in line with this, upon an elevation, a public library and art gallery, near which is located a cathedral, clubhouse, school and other public buildings; the whole surrounded and united by lawns, drives and gardens. And third an administrative or civic center.

The first of these would be the most expensive and most striking. The entire width of the boulevard would be divided into six longitudinal strips. "On each side, a broad paved sidewalk, 12 feet wide; between the walks and the curb a strip of parking, *i. e.*, turf 16 feet wide. Beyond the curb, on each side, a 28-foot driveway reserved for slow-moving vehicles; beyond this driveway on each side and nearer the center of the street a 30-foot driveway for rapid-moving or light passenger vehicles; in the middle a double car track. The only trees should be placed in the side parking between the walk and curb. To separate the two driveways on each side,

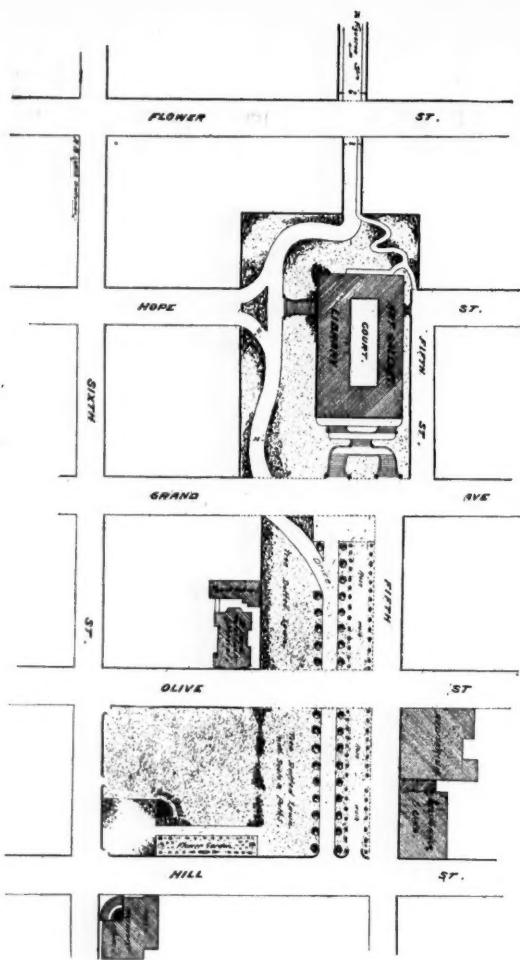
there should be a curb like a low coping. Upon this, but placed on the longitudinal axis and constructed without the cross bar, I would like to see the ornamental lights that are so pleasant a feature of your business streets. Each of these uprights would then carry one small and two large globes. The trolley wires should be suspended from ornamental center poles standing between the tracks and carrying cross arms that would stretch over the tracks. All other wires should, of course, be in conduits, for which there would be ample space in the side parking."

At the eastern end of this boulevard would be the façade of a union railroad station, with its curve of great columns. At the west end would be an isle of safety carrying a tall shaft, which might at first be an electrolier, but this should ultimately be replaced with something more impressive, in sculptured marble or other stone. "When this street is thus developed, I know of only two cities in the United States that will have such a splendid entrance. One will be Cleveland, where at a cost of fourteen million dollars the work is already under way; the other will be Washington."

As is seen on the plan, this boulevard would require the widening of Fifth street by the purchase of private property and the destruction of fully one-half of the buildings now facing upon that street.

In the administrative center, Mr. Robinson would group all the public buildings, the courthouse, city hall, federal building, county jail and other structures—all to be connected by small parks and new or extended streets so as to give a sense of unity and artistic grouping. The State has authorized the sale, for not less than \$500,000, of the normal school grounds west of the present central park, and it is proposed to purchase these and erect thereon an art gallery and library, and, by purchasing the block now separating these grounds and the park, form continuous grounds extending over these three blocks.

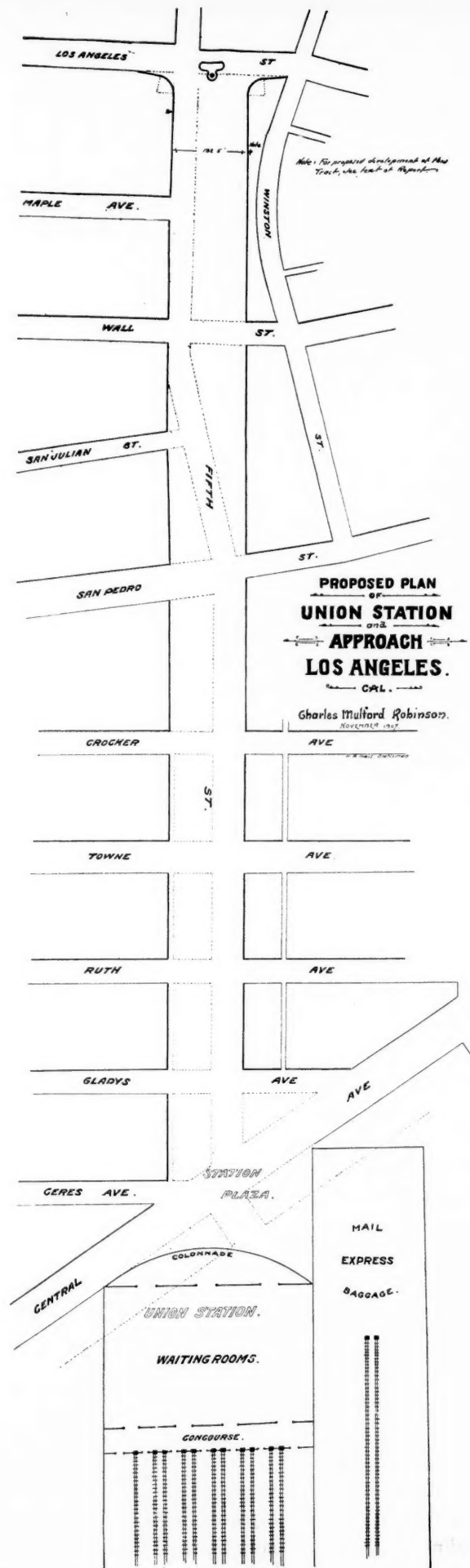
It is suggested that the city obtain from the Legislature the right to acquire property fronting upon these improvements, for the double purpose of insuring that the buildings erected thereon will not be such as to nullify the effect of the improvements, and also to enable the city to recoup the cost of construction by the resale of the property at the enhanced value which these improvements will undoubtedly give it.



Especial attention is called to the desirability of not concentrating all efforts at the artistic upon these improvements, but of endeavoring to bring the rest of the city into keeping with these show places. Street light posts should be painted bronze rather than green; glaring electric signs should be prohibited; low awnings should be raised or removed altogether; more fountains should be erected; many of the gores and triangles at oblique street intersections should be improved as parks, and especially should the roadways be narrowed and the parking between sidewalks and curbs be made wider in practically all the streets, it now not reaching even the minimum allowable width of from three to five feet in many cases.

Although the city is nominally on a river, the bed of this is dry for the most part of the year and a railroad is located on each side of it, which interferes greatly with including it in the artistic program. It is suggested, however, that at least the bed of the river should be cleaned of rubbish, that willows and sycamores be planted along its banks, and that concrete arches or some other artistic structures be substituted for the monstrosities which now do service as bridges.

One mistake has been made in Los Angeles which can be found to a greater or less extent in many cities. The high, rolling land back of the city, which should be the ideal residence section, has been slashed into because of



the idea of, the real estate speculators that, regardless of topography, every street should be straight and the checker-board rule supreme. The result is impossible grades, cuts in hills which, for expense of construction and for hideousness or scenic effect, outrival most railroads, which make building thereon expensive, which place lots too high or too low above the street for convenience or any other desirable characteristic, and which have nothing to recommend them and everything to damn them and which could have easily been avoided by a sensible location of streets according to the topography, letting them wind where necessary. Such a street location not only would have produced a more artistic effect and added to the value of the property for this reason alone, but also would have minimized the cost of street construction and reduced that of grading the lots facing thereon.

The bad location of streets around the proposed library building is to a degree remedied by the plans for that locality, an existing highway with a well-nigh impossible grade being both shortened and flattened in grade by its relocation.

In addition to the above, plans for other boulevards, pleasure grounds, parks and playgrounds throughout the city are considered and advised.

### SEPTIC TANK PATENT VALID

Circuit Court of Appeals Declares Valid the Cameron Patent for Septic Action—Patent for Apparatus Invalid—Uncertainties as to Scope of Decision

THE United States Circuit Court of Appeals on January 7th handed down a decision which is far reaching in its bearing upon sewage disposal and one which we believe was entirely unexpected by the majority of Sanitary Engineers. The Cameron Septic Tank Company brought suit some time ago against the village of Saratoga Springs, N. Y., for infringement of their patent covering septic action and septic apparatus. (See MUNICIPAL JOURNAL AND ENGINEER for April 10, 1907.) The United States Circuit Court last year declared both these patents to be invalid. The company appealed to the Circuit Court of Appeals, and this Court has sustained the lower court in its ruling on the apparatus, but reversed the finding of the lower court in so far as the process is concerned, declaring that the septic process is patentable and is covered by this patent. This would apparently permit the collection by this company of royalty from every city and village which has already constructed septic tanks, and those which shall in the future construct them, the number of the former approximating one hundred; indeed it has probably already exceeded that number if all the smaller plants be included therein.

The process claims are five in number and in each of the first four the process is described as one for liquefying the solid matter contained in sewage "which consists in secluding a pool of sewage having a non-disturbing inflow and outflow, from light, air and agitation until a

mass of micro-organisms has been developed of a character and quantity sufficient to liquefy the solid matter of the flowing sewage."

Claim three provides for subjecting the septic effluent to "an aerating operation."

Claim four provides for subjecting the septic effluent to "an aerating operation, and then to a filtering operation."

Claim five provides for "secluding a pool of sewage having a non-disturbing inflow and outflow, from air, light and agitation until a thick scum is formed on the surface thereof and a mass of micro-organisms has been developed of a character and quantity sufficient to liquefy the solid matter of the flowing sewage, the inflow serving to sustain the micro-organisms, and then subjecting said pool under the cover of said scum and under a non-disturbing inflow and outflow to the liquefying action of the so-cultivated micro-organisms until all the solid matter contained in the flowing sewage is dissolved."

It is seen by the above that a tank in each case is to be secluded from light and air, which would seem to specify a roof as necessary for the process. In the fifth claim this roof may be removed after the thick scum is formed on the surface of the sewage and the septic action has become fully developed. It would therefore appear as though tanks which had never been roofed could not be covered by this patent. The judge, however, in his decision has seemed to take a somewhat broader view than this. He states that: "We are satisfied that Cameron was the first one to subject a flowing current of sewage to the action of anaerobes and aerobes under conditions which secured their separate and successive action, the action of the segregated anaerobes fitting the effluent for subsequent filtration and aerobic action; and by reason of such careful segregation he was the first to secure such specified condition in the anaerobic colony that its capacity for its natural work had increased to such an extent that it became capable of disposing of practically all future inflowing sewage that entered its workshop without accumulating such a deposit of sludge as would require removal. This certainly involved 'the use of one of the agencies of nature for a practical purpose.' The process is one which puts a force of nature into a certain specified condition and then uses it in that condition for a practical purpose."

There is still possible an appeal from this decision to the United States Supreme Court, and we hope that such an appeal will be made in order that the decision may be final beyond all peradventure. The large number of cities and citizens interested in this decision seems to us to make desirable such absolute certainty. We wish that there could in some way be included in this final decision the further considerations as to what effect the absence of any roof whatever over the tank would have upon the question of infringement. Also what the effect would be of producing septic action in two tanks filled and emptied intermittently, the claim of the patent in each case referring to liquefying the solid matter of "flowing sewage."



Meantime those cities and private parties which have already adopted septic tanks will await with interest the next step to be taken by the Cameron Septic Tank Company.

The patent was granted October 3, 1899, and therefore has a number of years to run before expiration.

## STREET LIGHTING PRICES

Discussion of Massachusetts Statistics—Dividends—Prices Charged by Private Companies—Depreciation—Costs of Gas and Electricity

By ALTON D. ADAMS,  
Gas and Electric Expert, Worcester, Mass.

STREET lighting was the subject of articles in THE MUNICIPAL JOURNAL AND ENGINEER of December 4, and January 1, 1908, and figures there presented as to increased efficiency of gas and electric lamps purported to show that this increase might fairly lead to very material reductions in the prices of street lighting.

An editorial on street lighting prices in the latter of the above numbers of THE MUNICIPAL JOURNAL, takes issue with the author, and says:

"He fails \* \* \* to give sufficient weight to considerations which must be very important elements tending to limit the reduction in price. \* \* \* The installing of new machinery and new lamps necessarily means the scrapping of a large part of the old, which involves a loss to be deducted from gross profits."

As remarked by an English judge in an important case, "Those who do not know should inform themselves," and if the writer "fails" in the way indicated, "It were a grievous fault," but let us see.

The editorial states that some lighting companies have been operating at a loss, and this may be taken as true, but it remains to determine in any specific case whether the loss has been due to poor engineering in the construction of the plant, bad management in its operation, to sales of energy below cost to a few large consumers, or to the prices for street lighting.

Attention is also called to the report of the Massachusetts Gas and Electric Light Commissioners for the year ending June 30, 1905, to show that thirty of the companies operating electric plants in Massachusetts "were not able to pay dividends" in that year. Without inquiring whether the rates for street lighting by these thirty companies were higher or lower than the charges to private consumers, or whether their plants are reasonably well built and operated, it may be said that the report of the Commissioners does not show that all of these thirty companies were unable to pay dividends out of the earnings of the year in question.

The report of the Commissioners simply shows that the thirty companies paid no dividends for the year, but does not purport to decide that earnings were not sufficient to pay dividends. As matter of fact, the Massachusetts Commissioners have no direct control over dividends, and the lighting companies pay net earnings

to stockholders or invest them in new plant, as they see fit.

What the public is most interested in is not the amount paid out as dividends, but the amount earned above operating expenses. An extreme illustration of this fact came up in Massachusetts several years ago, when the stockholders of the Haverhill Gas Light Company sold its entire capital stock, whose par value had been \$75,000 since 1871, for \$500,000. From 1888 to 1901 inclusive the annual excess of earnings over operating expenses, not including depreciation, had ranged between 24.3 and 69.1 per cent. of its capital for the Haverhill Company, and there were no bonds.

After paying a 10 per cent. dividend in each year the gas company invested the surplus earnings in extensions of its plant, and the stockholders got this surplus when they sold out.

Returning to the thirty companies that paid no dividends in 1905, it appears on inspection of the report of the Commissioners that the plants of only three of these companies are located in cities, namely those at Boston, Woburn and Marlboro, and the remainder are in towns whose populations range between 1,340 at Conway and 15,590 at Leominster. At Boston the electric plant in question is confined to lighting in a block, and the Edison Company that lights the remainder of the city paid a dividend of 10 per cent. for the fiscal year, amounting to \$1,070,770.00.

In the small towns some of the companies reported an excess of earnings over operating expenses of only a few hundred dollars, but as indicated above, it would require an investigation in each case to determine whether the rates for street lighting were the proximate cause of the apparent lack of reasonable earnings. For reasons that will appear presently, however, it is not to be assumed that the reported excess of earnings over expenses of Massachusetts lighting companies is correct.

On the face of the reports it appears that a number of the thirty companies that paid no dividends in 1905 had a substantial excess of earnings over operating expenses, and a list of some of the companies that show such excess follows. Only earnings and expenses in the electric business are considered, and interest or incidental earnings received by the companies are not included. The Leominster Company is the only one of the eight named in the list that made any direct charge for depreciation, and in this case patent rights of \$3,000 were

SOME MASSACHUSETTS ELECTRIC COMPANIES THAT PAID NO DIVIDENDS IN 1905

COMPANY	Capital Stock	Excess of Earnings Above Expenses	Interest Paid	Earnings Minus Expenses and Interest	Per Cent. Earnings Minus Expense and Interest to Stock
Woburn.....	\$175,000	\$24,725.68	\$12,265.52	\$12,460.16	7.1
Central Mass...	150,000	16,860.69	12,354.64	4,506.05	3.0
Leominster....	50,000	13,873.24	3,957.70	9,915.54	19.8
Plymouth....	90,000	10,444.39	4,511.03	5,933.36	6.5
Weymouth....	50,000	9,775.25	7,064.34	2,710.91	5.4
Amesbury....	50,300	7,917.15	3,111.67	4,805.48	9.5
Winchendon...	12,000	4,403.49	971.83	3,431.66	29.0
Black Plant...	9,500	3,870.04	1,597.50	2,272.54	23.9



charged off, though it is open to question whether this was a proper deduction from income. With this lack of direct charges for depreciation it does not necessarily follow that depreciation was not covered or more than covered by the items for repairs and renewals in the expense account, as will appear.

For each company the capital stock and the interest paid on bonds or notes, as well as the excess of earnings, are stated, but it is not assumed that the sum of these stocks, bonds and notes bears any particular relation to the physical assets of the companies. Among the eight selected companies the excess of earnings over both expenses and interest payments ranged from 3 to 29 per cent. of the capital stocks for the year ending June 30, 1905. If the item of \$3,000 for patent rights was a proper charge against income, the earnings less interest of the Leominster Company should be reduced accordingly from the 19.8 per cent. shown.

The figures for these eight companies are introduced simply to show that their failure to pay dividends during the year named is not proof that they did not earn dividends, or that their rates for street lighting were too low.

No opinion is expressed here as to whether the repair charges of these companies were large enough to cover or more than cover depreciation, or as to the ratios of their earnings minus expenses to the values of their physical assets.

It is obviously misleading to cite the operating results of the thirty small companies that paid no dividends, whatever their earnings may have been, as an argument against lower rates with more efficient lamps for street lighting, and then to say nothing about the earnings of the larger companies that did most of the business.

During the year ending June 30, 1905, the finances of all the electric companies in Massachusetts, including those that paid no dividends, were as follows:

Reported capital stock .....	\$18,333,061.65
Reported surplus .....	1,905,770.94
Per cent. of surplus to capital, average.....	10.4
Dividends paid .....	1,489,247.70
Per cent. dividends to capital, average.....	8.12
Total earnings less expenses.....	2,919,340.23
Interest paid .....	374,918.63
Depreciation .....	312,084.55
Earnings less expenses, depreciation and interest..	2,232,337.05
Per cent. of earnings less expenses, } ....average	12.1
Depreciation and interest to capital, }	
Other items charged against income.....	836,296.97

With an average reported surplus equal to 10.4 per cent. of their total capital, average dividends of 8.12 per cent. on that capital for the year, and an excess of earnings over reported expenses, interest and depreciation charges equal to 12.1 per cent. of the capital, it is not apparent that such reductions in the prices of street lighting as are warranted by the higher efficiency of lamps will work any general hardship to electric companies.

Of course, what reduction is reasonable in any particular case is a matter for investigation, and there are perhaps cases where no reduction is warranted.

The fact is that some of the gas and electric companies in small towns have shown only modest earnings, while the great bulk of these interests, represented by the larger

companies, have enjoyed increasing prosperity in recent years.

Expenses of gas and electric companies, as reported in Massachusetts, are not necessarily accurate, because some companies charge large sums as repairs and renewals that really go for extensions of plant. Examples of this sort may be found in some of the latest reports, but the noted Holyoke case furnishes enough. In that case the City of Holyoke was forced to purchase gas and electric plants that it did not want, for the sum of \$706,543, of which the electric plant represented \$329,870, on a valuation as of January 1, 1898, though the value of this electric plant was reported to the Gas and Electric Light Commissioners as \$141,197 on June 30, 1897.

According to the testimony of one of the witnesses for the company in the suit brought to force the city to purchase these plants, additions to the gas plant and mains to the sum of \$30,333.40 during the year ending in June, 1897, should have been charged to construction and thus increased the value of the property, though these additions were included with the operating expenses in the report to the Commissioners for that year.

The manager of one of the largest gas and electric plants in the state was another witness for the company at Holyoke, and on direct examination the following dialogue ensued:

Question. \* \* \* Your plant by that table is represented as paying for repairs for the years 1897-98 \$40,019.90. Did your company expend any such amount as that in that year for repairs?

Answer. Not for repairs; no, sir.

Question. What does that forty thousand and odd dollars represent?

Answer. That must include considerable in the line of extensions.

Question. How much in your opinion?

Answer. I should think two-thirds of it.

The \$40,019.90 in question had been reported to the Commissioners as expended for repairs and renewals. So much for the conclusions to be drawn from reports of operating expenses.

Now let us inquire what bearing the scrapping of old lamps and apparatus has on future prices for street lighting.

Depreciation runs with time, and should be paid for by the consumer from year to year as the apparatus is worn out and becomes antiquated, just as he pays for the depletion of the coal pile. To charge depreciation that has accrued in the service of past consumers into future rates is usually bad engineering, bad accounting and bad law.

If a company has been unable to pay for the coal burned or the pipes rusted out in past years and make a fair profit, this is its misfortune, and it has no legal right to shift the burden onto future consumers.

But it is seldom that the adoption of improved forms of street lamps will subject the more prosperous lighting companies to any real loss, for these companies have usually obtained enough for street lighting to cover any possible depreciation and pay good profits besides. When the old apparatus is discarded the company simply buys new equipment with money that the public has furnished.

An example may be noted in one of the large cities of Massachusetts, where the electric company was organized in 1883, and has used open arc lamps of the same type and probably the same lamps with additions from year to year to provide for the increasing demand, to light the streets, up to a very recent date. The prices obtained from the city for street lighting have generally been higher, if reduced to an energy basis, than the prices charged to some private consumers, though the city has been the largest lighting consumer and the consumer using lamps the largest number of hours per day, if there be any weight in these facts.

Since 1890, at least, the annual dividend of this company has not been less than 8 per cent., and in one year it reached 18 per cent., while the percentage of earnings minus interest and expenses to capital stock has ranged from 11.32 to 36.15 per cent. Depreciation charges have been irregular and are not deducted from earnings to obtain the last named figures, but the company reports a surplus of more than \$300,000.

Recently the open arc street lamps operated by this company were replaced by a new type of much higher efficiency that saves about 35 per cent. of the energy formerly used, and requires only a fraction of the former expense for care and trimming. With this change in lamps, the price for the same hours of operation was reduced about 17 per cent.

Before the old lamps were replaced their value had no doubt fallen to less than 20 per cent. of their cost, and it is fairly evident from the above figures as to earnings and surplus that the city had paid for this depreciation by contributing a fund that could be used for the purchase of new lamps.

In street lighting with incandescent electric lamps, the lamps are regularly renewed out of operating expenses, and the substitution of more efficient lamps will usually make little if any additional investment in fixtures or equipment necessary.

The editorial says that the cost of current or gas is only 25 to 35 per cent. of the total expense of street lighting to the company, but known facts do not appear to support this view. Of the various forms of gas and electric street lighting used in the United States, mantle gas lamps require, perhaps, greater outlay for operation and repairs in comparison with the cost of the lighting agent than any other. In the MUNICIPAL JOURNAL AND ENGINEER of December 25, 1907, page 724, the contract figures for mantle gas street lamps in Buffalo are given as \$19.83 per lamp per year, this sum being made up of \$10.95 for the use, care and repair of the lamp, and \$8.88 for the gas used, at 75 cents per 1,000 feet. This makes the gas cost 44 per cent. of the total charge, it being the practice of the company named at Buffalo to include the use of its own lamps in the price for street lighting. With gas at the more usual price of \$1 per thousand, its cost would be \$11.84, or nearly 52 per cent. of the charge of \$22.79 per lamp, on the above figure of \$10.95 for use, care and repairs. A material item in the cost of gas street light-

ing is the labor of lighting and extinguishing the lamps. Flaming arc lamps require a relatively large expenditure for care and carbons, over either the plain open or enclosed arc. In Cleveland, Ohio, according to the Electrical World of December 7, 1907, page 1121, the electric lighting company supplies flaming arc lamps to consumers and operates them from dusk to 11 p. m. daily, for a charge of \$6.25 per lamp per month for the energy used. Another corporation cares for and trims these lamps at a cost to the consumer of \$2.75 per month per lamp, so that the total charge to the consumer is \$9 per lamp per month. Of this total the charge for the loan of the lamp and energy to operate it is almost 70 per cent.

If these lamps operated during more hours per day, the relative charge for energy would no doubt be greater.

With metallic arcs that are trimmed once for 150 hours burning, with an electrode costing ten cents, the ratio of energy cost to trimming and repairs should be materially larger than that just stated.

In incandescent street lighting the renewal of and care for the lamps may easily be under 15 per cent. of the total charge for electric energy and service.

Some of the electric companies are supplying energy to the more efficient lamps at the same rates per kw. h. as before, for private consumers, and it is not clear why cities and towns should be in a worse position.

#### Unusual Paving Methods

CORTLAND, N. Y., has paved many of her streets with macadam, for which is used, instead of stone, "hard steel" slag given to the city by a local steel mill. This slag is much harder than trap rock, and at first much difficulty was experienced in causing it to bind properly, but clayey loam seems to effect this, being added dry in some cases, in others flushed in wet. This macadam costs about 50 cents a square yard. The surface is finished with limestone screenings. Most roadways are 26 feet wide and furnished with 18-inch concrete gutter and 6-inch concrete curb.

A German system of paving, being introduced into England, also, under the name of Durax Dustless System, is said to be free from dust and mud and have the resiliency of rubber paving. The surface consists of 4-inch cubes of stone, cut and faced by machinery so true as to leave no interstices when set. These stones are set by skilled labor like mosaic and arranged in intersecting curves, so that the joints are broken as much as possible, this method of laying constituting one of the most important features of the system. Any small interstices are grouted with sharp sand. The stones are then settled by heavy rammers and a perfectly smooth surface obtained, yet said to give an excellent foothold. The foundation may be concrete or old macadam. If the latter, the macadam is removed to a little more than four inches below the finished grade, rolled and leveled. A thick cushion layer of sand is spread on the foundation. The total cost (presumably exclusive of foundation) is said to be about \$1.75 per square yard.



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JANUARY 29, 1908.

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## Ashokan Reservoir Award

A DECISION rendered by the Corporation Counsel, under the request of Mayor McClellan, has apparently terminated the controversy over the awarding of the Ashokan Dam contract to other than the lowest bidder. The Corporation Counsel states: "There can be no doubt that the Board of Water Supply acted entirely within its power when it assumed to determine the question whether or not it was for the best interests of the city to let the contract to other than the lowest bidder." The Legislature, in the act creating the Board, provided that members could be removed only for incompetency and misconduct; and the Corporation Counsel believes that errors in judgment, assuming them to have been proved, could not be classified under either of these heads. There have been no suggestions by any one reflecting upon

either the integrity or the motives of the Commissioners. He therefore is of the opinion that there is no warrant for the preferment of charges against the Board.

## Street Lighting Prices

IN an article on another page Mr. Adams professes to take exception to certain statements made by us on January 1, and in connection therewith introduces some interesting statements concerning lighting companies' finances. Of his argument, however, a large part seems to be devoted to proving what we stated—that "in many cases lighting prices have been reduced, and in still more they should be." He also admits another of our contentions, that "what reduction is reasonable in any particular case is a matter for investigation, and there are perhaps cases where no reduction is warranted."

That cases could be cited where the prices are unquestionably too high it would have been foolish to dispute. Besides, it is entirely outside the matter treated of in our editorial, which was that the invention of lamps giving 36 to 42 per cent. more efficiency than the old did not of itself warrant a reduction of that amount in lighting prices, and citizens who hoped for such a result were doomed to disappointment. That some companies could greatly reduce prices, even while using old style lamps, has no bearing on the question. In arguing these the author is merely knocking down a straw man set up by himself for this purpose.

But when he touches upon the real issue we begin to differ. He states that the new lamps will be paid for out of the depreciation fund collected from past consumers. But we know of arc lamps which have been in use ten years or more. Suppose a depreciation of eight per cent. has been set aside annually by a given plant to renew lamps after ten years of use, and these lamps are now but two years old, either the company must wait eight years before they can purchase more efficient lamps, or they must obtain them now by raising additional capital or withdrawing present earnings to obtain the purchase money. In fact, since the new lamps are more expensive than the old, even if the sinking fund has matured it will still be insufficient. The fact—when it is one—that the company has bled past consumers to accumulate a surplus out of which they can draw such purchase money is another matter altogether; it could just as legitimately be used as an argument for reducing future rates if there were no more efficient apparatus available.

The next question at issue is whether the more efficient lamps permit a reduction in rates equivalent to the increase in efficiency. Mr. Adams does not claim that the proportion of the price affected by increased lamp efficiency is greater than 44 to 70 per cent.; and even on this basis the reduction due to 36 to 42 per cent. increase in efficiency would not be more than 12 to 20.7 per cent. But his reasoning is incorrect. In the first case the \$8.88 paid for gas in-



cludes fixed charges of the gas company and rental for the use of the mains by which the gas is delivered, neither of which would be diminished by decreasing the volume of gas manufactured. Should the amount of gas manufactured be suddenly reduced by 42 per cent., the price must be increased to meet these fixed charges.

The figures given for the Cleveland case throw no light on the subject, since the \$6.25 includes a dozen classes of items which are not affected by reducing the amount of electric energy required by the lamps. The report of the Massachusetts Commission indicates, as shown on page 8 of our January 1 number, that of all the expenses of the electric lighting companies of that State 36 per cent. was for power and the rest for globes, transmission line, general salaries and other expenses which would not be affected by the efficiency of the lamps. But only 40 per cent. of this power was used for public lighting, while it is probable that such lighting required a much higher percentage of the expenditures for globes, lamps and wages for care of lights (which constituted 20.2 per cent. of all expenses) than did the lights of private consumers. Our estimate of 25 to 35 per cent. therefore seems to be supported by these figures, the most reliable ones obtainable in this country. On the basis of these percentages, 36 to 42 per cent. increase in efficiency would permit a reduction of 6.6 to 10.4 per cent. in price, other things being equal, and no allowance being made for expenditure in lamps, rewinding dynamos and other costs incident to the change.

#### Inartistic Peripatetic Signs

VARIOUS decisions have been rendered in many States upholding the right of municipalities to prohibit the display of signs offensive to the eye, but we believe the decision rendered a few days ago by Justice Leventritt of the New York Supreme Court is somewhat unique. This decision pronounced constitutional an ordinance passed by the Aldermen giving the city power to remove signs from Fifth Avenue buses. These new double-deck electric buses have been in use on Fifth Avenue for a few months only and from the first have been almost concealed behind garish advertisement signs. Justice Leventritt, in his decision, after describing the beauty of Fifth Avenue, declared: "It is amid such scenes as this that the plaintiff's advertising panorama of brilliant signs moves. It is along this avenue of churches that on Sundays these glaring billboards are driven. It is the scheme of beauty which is sacrificed to the demands of modern commercialism."

#### Paving Contracts and Selection

Two ideas discussed in these pages several times during the past year are illustrated by recent remarks of the City Engineer of Altoona, Pa. Mr. Engstrom is preparing to award contracts for ten miles of paving in sufficient time to permit the actual construction to begin as early in the spring as weather will permit, and intends

to have all the data ready before that time so that no cause for delay in construction can be charged against the engineer's department. This action is commended to other cities for imitation.

He also calls attention to the objectionable features of establishing hard and fast rules concerning paving, and of the selection by non-specialists of the kinds to be laid. One of the pieces of work ordered for next year is the paving of a 23 per cent. grade with brick on 6 inches of concrete. Such a grade is practically impossible for teams, and gulying of the surface by rains could be prevented much more cheaply. Six-inch foundations he believes to be unnecessary for alleys, also, but he is required to use it there. Altogether he believes that of the \$100,000 proposed expenditure for paving this year one-half could be saved by using a little good judgment. This seems like a pretty strong statement, but if it is half true the city is paying dearly for the privilege of individual selection of paving. Such selection should be based on engineering principles and not on mere whims, which might suffice for selecting the color of a fence.

#### Water Main Leakage in Washington

SURVEYS were made last year by means of the Cole pitometer to determine the leakage in Washington's water distribution system. By this means wastes were found as follows: Blow off found open, discharging 75,000 gallons per day; breaks in mains, from which was lost 149,000 gallons per day; breaks in service pipes, from which was lost 457,000 gallons per day; and waste in fixtures, etc., detected, 233,000 gallons per day; a total of 914,000 gallons per day. The cost of the investigation was \$10,593.96, of which \$4,717.63 was for labor, \$4,014.74 for permanent connections, \$1,625.90 for instruments and \$235.69 for miscellaneous material. The fact that, as a general rule, the leaks were found in service pipes was a source of delay, necessitating the cleaning and, in many instances, the replacing of cut-off boxes. This shows a cost of a little over one cent for each gallon per day of waste detected and saved, or about one cent for each 315 gallons per year.

The average cost of pumping for the year was \$.377 per one thousand gallons, this not including repairs to machinery nor general expenses. It therefore appears that the waste investigation was paid for several times over by the reduction of leakage for one year; but it is probable that most of this saving will continue for many years to come, and also that the discovering of these leaky fixtures will lead to voluntary repairs to others not directly discovered.

The extensions to the distribution system were laid by day's labor and cost as follows: 2,392 feet of 4 inch cost per foot 37.1 cents for labor, 56 cents for material, 93.1 cents total; 8 inch, 55,279 feet cost 42.4 cents for labor, 94.8 cents for material, or \$1.372 total; 12 inch, 10,104 feet, cost 61.4 cents for labor, \$1.632 for material, or \$2.246 total. These costs do not include repairs to improved pavements.

## NEWS OF THE MUNICIPALITIES

### Divers Subjects of General Interest and Their Treatment by City Councils and Officials—Streets, Water Works, Lighting and Sanitary Matters—Police and Fire Items—Government and Finance

#### Roads and Pavements

ALBANY, N. Y.—The creation of a State Bureau of Highways, to have charge of construction, under the \$50,000,000 bond issue, is contemplated in a report to be submitted to the Legislature by a committee that has made an exhaustive study of the subject during the past year. The Bureau is to be in charge of a Superintendent, appointed by the Governor, who will be responsible for all highways paid for in whole or in part by the State. A Consulting Engineer will have charge of plans and estimates and an Assistant Superintendent of Road Repairs. There will be a system of District Commissioners appointed by Town Boards, in order to keep in close touch with the local authorities.

ATLANTA, GA.—The annual report of City Engineer R. M. Clayton, shows the following facts: Curbing and sidewalks: Miles laid in 1907, 10.77, costing \$63,830.74, as compared with 7.95 miles for 1906, costing \$43,631.94. Gain, 2.82 miles and increased expenditure, \$20,198.80. Streets paved by assessment and by Fulton county: Miles put down in 1907, of asphalt, granite block and bitulithic, 2.40, costing \$75,967.66, as compared with 1.37 miles for 1906, costing \$58,177.56. Gain, 1.03 miles and increased expenditure of \$17,790.10. Sewers: Miles put down in 1907, 9.49, costing \$108,465.24, as compared with 7.18 miles for 1906, costing \$53,486.24. Gain, 2.31 miles, and increased expenditure of \$54,979.00. Of the sewers put down during the year, 1.22 miles were trunk sewers, and 8.27 lateral sewers. The total number of miles of sewers in the city at the close of the year was 139.06, and the total cost up to date, \$1,331,112.76.

BIRMINGHAM, ALA.—According to the report of City Engineer Julian Kendrick, Birmingham spent \$337,000 in street improvements during 1907. Five miles of pavements were laid. Of this amount, 3.7 miles were Bitulithic, costing \$141,000, and 1.2 miles were vitrified brick, costing \$105,000.

INDIANAPOLIS, IND.—The total mileage of street improvements in the last three years was 64 in 1905, and 72 in 1906, and 135 in 1907. The cost for each year was \$716,588, \$706,189, and \$1,461,822. It will thus be seen that the amount in 1907 was almost as great as the total amount laid the two previous years.

LOUISVILLE, KY.—The Public Thoroughfares Commission has made two suggestions to the Board of Public Works which it desires to have carried out by ordinance or statute. The first is to make it unlawful for any corporation or person to cut into a street without permission of the Board. Before a street is paved persons interested must lay all pipes, etc., likely to be needed in the succeeding five years. In case of urgent necessity a pavement may be cut, if permission is given, and if the city is secured against any damage that may result. The second suggestion is that a topographical survey of all territory within three miles of the city limits be made, and proper future extensions of streets and alleys laid out according to a general plan.

MASSILLON, O.—Figures compiled by City Engineer Howard, show that the city now has 9.13 miles of paved and 36 miles of unpaved streets. Of the unpaved streets, 14 miles have been improved by the setting of curb and

guttering. There are twenty miles of alleys. These cause the city more expense for cleaning than the streets, because of the rubbish which accumulates.

TOLEDO, O.—The Rail Light Company, operating street car lines in Toledo, sometime ago refused to pay for the cost of paving between its tracks on twenty streets, on the ground that the concrete was not properly laid, and that this caused damage to the rails and streets. An investigation has been made and the decision reached that the concrete was all right and in accordance with the specifications. The city will now push its claims. The amount involved is \$500,000.

#### Sewerage and Sanitation

ALLENTOWN, PA.—Mayor Schaeffer's views regarding house sewage were indorsed at a recent meeting of the Chamber of Commerce, called for the purpose. The plan is for the city to construct and own a complete sewerage system.

CAMDEN, N. J.—The annual report of the Medical Inspector, Dr. John F. Leavitt, and Secretary Eugene Roberts, of the Board of Health, shows that there were only two deaths from typhoid fever during the year—a remarkable record for a city of nearly 100,000 population. The city uses artesian water.

LOWELL, MASS.—Some time during the present year a petition for a sewer, entailing an expenditure of \$700,000, will be presented to the Committee on Sewers. The proposed sewer will be one of the biggest jobs ever undertaken by the city and will drain a large portion of the newly annexed portion of Tewksbury.

SYRACUSE, N. Y.—Alderman Andrew Goettel, Jr., has introduced for passage by the Common Council, the sanitary code and health ordinances. The code is substantially the same as recommended by the Municipal Affairs and Health Committees of the Chamber of Commerce.

TOLEDO, O.—The question of city and county co-operation in the matter of bringing about the purification of the Maumee river is being agitated by the Riggs and Sherman Company, Consulting Engineers, who are now engaged on the prospective sewerage works for some suburban towns about Cincinnati. There is a statute permitting such co-operation but so far advantage has not been taken of it. The Maumee will soon have to be purified as a protection to the city's water supply.

WAPAKONETA, O.—The Village Council is helping to solve the problem of the unemployed by making improvements. Three sewer contracts for which bonds were sold only a week ago have been let and the work will be commenced at once.

WASHINGTON, D. C.—Dr. W. C. Woodward, Health Officer of the District, is in favor of a National Bureau of Health, the establishment of which is being agitated at the present time, and which has the indorsement of President Roosevelt. In speaking of a National Bureau of Health, Dr. Woodward said there is urgent necessity for it. He coincides with President Roosevelt in the belief that it would not be practicable to create a cabinet office for that department, but that the work should be intrusted to an individual bureau, such as the Bureau of Education, or the Bureau of Labor.



### Water Works

**ABILENE, KAN.**—Abilene draws its water supply from sand springs. The Holly System is employed in connection with a stand pipe of 150,000 gallons. Two Worthington engines, with a capacity of 2,500,000 gallons daily, constitute the pumping plant. There are fifteen miles of mains, which are provided with eighty double-nozzle fire hydrants. The ordinary domestic pressure is forty pounds, the fire pressure 100 pounds. The daily consumption of 750,000 gallons averages 166 gallons per capita.

**EAST HAMBURG, N. Y.**—A new 10,000,000 gallon storage reservoir has just been completed by the Western New York Water Company. A large pumping plant, run by electricity, supplied from Niagara, will be put in operation February 1, furnishing 16,000,000 gallons of water daily out of Lake Erie, for the use of Buffalo suburban towns and industries.

**EAST LIVERPOOL, O.**—The new administration is considering important changes in the present water supply. Not only is the present supply from the river unwholesome, but dams are being built which will place the present intake in slack water where the contamination from sewage will be greater. Investigations are being carried on by Superintendent A. Calhoun, as to the capacity of the water-bearing rock strata in the vicinity. Artesian water is likely to be used for a part at least of the supply.

**GLOUCESTER, MASS.**—The Water Commission has contracted for the building of a storehouse at a cost of about \$1,500. The building will be forty by seventy feet, with fifteen feet strud, one story, with pitch roof. It will be used as a general storage building for the large amount of supplies which the department finds it advisable to carry in stock. A portion of the building will be set off for a blacksmith shop. A place will be provided where service pipes may be lined with cement. It is a much needed improvement.

**LOUISVILLE, KY.**—The recent investigation into the affairs of the Louisville Water Company, made by the Audit Company, of New York, has cost the city \$36,799.

**NEW YORK, N. Y.**—Mayor McClellan has announced that the charges proposed by the Commissioners of Account against the Board of Water Supply, in connection with the Ashokan dam contract, have been dropped. This action followed an opinion given by the Corporation Counsel that the contract has been awarded legally.

**PITTSBURG, PA.**—A joint resolution has been offered in Select Council for a joint committee of seven to conduct an investigation of the work of the filtration plant. It recites that the plant will not be completed for at least six months, that the specifications have been repeatedly altered without the authority of Councils, and that the Civil Service Act has been violated in the maintenance of the force of employees. It is said that claims for extra work amounting to \$500,000 will be made by the contractors.

At a session of the Board of Appraisers for the Monongahela Water Company, the lowest estimate of the value yet given was made by Mr. George H. Benzenburg, of Cincinnati, O., who stated that in his opinion the plant was worth \$849,247. J. W. Ledoux, an engineer of the American Pipe Manufacturing Company, of Philadelphia, said that in all his experience he had never seen a plant as badly managed as that of the Monongahela Company. He placed the value of the plant at \$1,500,000. Their experts claim the plant to be worth \$4,000,000.

**SPRINGFIELD, O.**—According to the report of Chief Engineer William Blazer, the amount of water pumped last year averaged 4,048,716 gallons daily. There was

an increase of two per cent. over the amount pumped last year. The total coal consumption was 4,466,129 pounds, or 12,235 pounds daily—a decrease of 6 per cent. on the amount consumed during the preceding year. The average cost per million gallons last year was \$3.40—a reduction over the previous year. The highest cost since the plant was in operation was in 1887, when it was \$7.88 per million gallons.

**WILMINGTON, DEL.**—Because so many men in this city are out of employment, the Water Commissioners intend to carry on all the improvements they have planned in order to give work to as many men as possible. It is probable the Commissioners will ask the City Council to dispose of nearly \$500,000 worth of bonds, to enable the department to complete all the new work.

### Street Lighting and Electric Power

**BIRMINGHAM, ENG.**—The Electrical Supply Committee of the Birmingham City Council has been authorized to expend \$97,330 for the purchase of motors. The idea is to increase the use of electricity as a motive power among small manufacturers by permitting them to hire motors from the city for power purposes. This is believed to be a new departure in municipal business activity. At the same time there has been a reduction of the scale of charges for electricity for power purposes. Birmingham has expended several million dollars in erecting its modern electric power houses. It furnishes electricity not only for lighting and power purposes, but for the electric street cars, which the city also owns and operates. An additional plant has to be provided at an estimated cost of \$1,125,548. There is friendly rivalry between the Electric Supply Committee and the Gas Committee of the Birmingham City Council for business, each committee endeavoring to promote the use of its lighting and power facilities.

**CARTHAGE, MO.**—With an estimated saving of \$6,770, and a net revenue of \$1,618 over the actual running expenses of the municipal lighting plant, the citizens are inclined to think municipal ownership is not a bad thing. The city is furnished street lights that would cost at least \$6,000 a year. Besides free lights are furnished to the Fire and Police Departments, worth \$120; public library, \$350, and the city hospital, \$300.

**NIAGARA FALLS, N. Y.**—The Niagara Falls Lighting Company, which was granted a franchise last fall to use the streets of the city for the distribution of electric power, has addressed a communication to the Common Council, asking that preparations be made for receiving a bid from the company for street lighting. The present contract for 600 arc lamps at \$65 a year will expire next November, and the company, through its president, James E. Rock, states that it will make a bid much below that price.

### Fire and Police

**CARBONDALE, PA.**—The fire losses for the year amounted to \$100,000, about three times the amount of the loss during the preceding year.

**CORNING, N. Y.**—Chief O. W. Farr, of the Corning Fire Department, in his fifth annual report, says that the Department consists of 115 volunteers, 8 call men, and 8 permanent men. There were 82 fires during the year, entailing a loss of \$16,572. The causes of fires were: Overheated pipes, 16; matches, 12; chimney, 11; sparks from railroad engines, 5; oil lamps, 8; stoves, 5; gas jets, 10; lightning, 2; fireworks, 2; electric wires, 1; sulphur, 1; unknown, 11; false alarms, 4. Of the alarms, 32 were sent over the fire alarm system, 33 by telephone, and 17 were verbal.



DAYTON, O.—The annual report of Chief Ramby gives the number of fire alarms as 489, of which 271 were sounded from boxes, and 218 were still alarms. The total loss to property was \$124,818. The loss shows a slight increase over the previous year, but compares favorably with the record of the past ten years.

DUNKIRK, N. Y.—Fire Chief A. K. Loeb is agitating the organization of a municipal fire insurance company. He would have the business of the company purely local and devote the profits to equipping and maintaining the Fire Department. Mayor Einstein will refer the matter to City Attorney Heffernan for an opinion in connection with the work of drawing up a new charter.

ELGIN, ILL.—Chief of Police Younger is about to install a new system of filing reports of the cases coming under police notice. Each officer will be supplied with cards on which will be entered the information in cases attended. There will be a place for the facts in the cases of disturbances suppressed without arrests, lights out at different places, doors found unlocked, holes in sidewalks, and other matters. The cards will be filled out by the officer on the spot, inspected by the chief, and filed away.

FORT WORTH, TEX.—Complete separation of the Police and Detective Departments has been made by order of the City Commission. The Chiefs of both departments will hereafter report direct to Commissioner Mulkey.

GALVESTON, TEX.—The City Commission has amended the fire ordinance by extending the fire limits so as to include several more blocks in the business district. Henceforth in the prescribed territory no frame building can be erected, and repairs, additions or improvements to present frame structures will not be permitted. When the wooden buildings became uninhabitable they will be condemned and must make way for brick, stone or metal structures.

MERIDEN, CONN.—Mayor Thomas L. Reilly, in his annual message, advocated municipal fire insurance. He estimated that citizens pay yearly premiums to fire insurance companies of about \$300,000. The average fire loss is \$20,000. If the city should insure its citizens in two years it would have a fund of \$550,000, after deducting the losses. The surplus on this insurance tax, leaving the two-year accumulations as a reserve, would pay all the running expenses of the city.

PHILADELPHIA, PA.—Twelve mounted policemen with megaphones, assisted in carrying out the new rules formulated by Superintendent Taylor, for handling the opera traffic, in conjunction with a special detail of reserve policemen, who also carried megaphones. Nine sections for waiting carriages were laid out on adjoining streets with a mounted policeman in charge of each. Checks are given out to each driver when the carriage arrives and a corresponding number to the occupant of the carriage. The check also gives the section in which the carriage must wait. Five carriages may load at one time.

RICHMOND, VA.—A firemen's relief bill is being considered by the Legislature. It provides that all foreign insurance companies doing business in any town must apportion to the local Fire Department 2 per cent. of its insurance within the corporate limits of the city. By "foreign" company is meant one, the home office of which is not within the town. The funds secured in this way are intended to be utilized for pensions.

TOLEDO, O.—Chief Mayo, in his annual report, urges the need of a fire boat to protect, not only the property along the water front, but to assist in the protection of the downtown section, by means of auxiliary mains. The special mains and independent hydrants should be laid on streets abutting the river, from Washington to

Cherry street and from the river to Michigan street. The construction of at least ten fire cisterns in the business section is also recommended.

UTICA, N. Y.—Mayor Wheeler and Commissioner of Public Safety Church inspected the Police and Fire Departments of the city and plainly told the men that under the present administration they need have no fear in case they did their duty and need expect no favor in case they were derelict, and that outside influences would hereafter receive no consideration.

WASHINGTON, D. C.—In answer to a request from Commissioner Macfarland, as to the quality of the fire hose in possession of the Fire Department, Chief William T. Belt reports that the hose is second to none in the country. No hose in use is over seven years old, and annual inspections are made for testing purposes. A test was made during the Convention of the Fire Chiefs last October, when 4,000 feet were laid out and seven engines employed in the experiment. Although the highest pressures obtainable were employed, not a single section burst.

WASHINGTON, N. C.—The report of Fire Chief J. M. Gallinger makes a fine showing for last year. The Department attended twenty-seven fires and the loss was only \$400.

#### Government and Finance

BALTIMORE, MD.—The gross debt of the city is \$49,070,932, including a floating debt of \$1,314,650, against which the city has a sinking fund of \$17,517,580. The value of productive assets, with the sinking fund, are figured to reduce the net debt to \$19,883,883.

BIRMINGHAM, ALA.—The prohibition law, which went into effect January 1, is giving the city a serious financial problem. The loss in revenues from liquor license is \$150,000. To make up this deficit, licenses had to be increased on all lines of business. A special poll tax of \$3 has been levied on all men between the ages of 21 and 50, for street purposes; this is a very old law revived. According to law, the tax rate on real estate cannot be increased over \$1 on \$100. Besides this the receipts from the Police Court have decreased at the rate of \$75,000 a year. The chain gang that formerly did work on the streets has diminished from the usual number of 125 to only 25. At the present rate there will be only ten convicts in the street gang, and the good people will have to pay for employing free labor.

BOSTON, MASS.—Since assuming office, Mayor George A. Hibbard has been busily swinging the axe decapitating officials whom he considers as superfluous or inefficient. Among those whose services have been dispensed with are Deputy City Collectors Barrett and Howard, Clerk Noonan of the Sewer Department, Inspector of Painting F. J. Kneeland, Secretary Ferreno of the Water Department, Constables Duffy and Grant of the Street Department, Wire Commissioner P. J. Kennedy; Tom Whalen, Superintendent of Printing, who is succeeded by William H. Minot; Matthew Cummings, Superintendent of Street Cleaning, and James F. Nolan, Superintendent of Public Buildings, George W. Morrison succeeding to the latter office.

CARTHAGE, Mo.—The special committee to arrange for a popular issuance and sale of city water work bonds has taken steps to dispose of \$220,000 worth by advertising them for sale to the public. The bonds will be issued in sums ranging from \$10 to \$1,000, and will bear five per cent. interest.

CLEVELAND, O.—A resolution introduced by Councilman Haserot, has been adopted to the effect that the Legislature be requested to so enlarge the powers of municipal corporations as to enable them by direct labor

to construct street pavements, sidewalks and sewers. The resolution recites that in the construction of street pavements, sidewalks and sewers it often occurs that the line between new construction and repairs is difficult to draw, and that new construction in short sections can be more readily and economically done by the repair equipment already maintained.

DAVENPORT, IA.—The plan to adopt the Des Moines Commission plan of government was lost at the poles by a vote of 3,111 to 2,713—a light vote. Fear that the "lid" would be clamped tighter than ever is said to have developed the opposition that defeated the scheme.

FRANKFORT, KY.—Mayor Clarence E. Woods, of Richmond, who is an advocate of a new uniform system of public accounts has conferred with State Auditor Frank P. James about the matter. The scheme contemplates a Bureau of Accounting in connection with the Auditor's Department, to supervise cities, counties and school districts, insuring uniformity in all public accounting, and the integrity of all reports. The law is to be similar to that operating in Ohio, which it is said has saved the taxpayers \$4,000,000 annually.

LOGANSPOUT, IND.—Logansport officials report that the city debt last year was reduced \$50,706.02, leaving the total city debt \$302,617.52. The present administration promises if it is continued in office to put the city on a cash basis and wipe out the city debt in five years.

MILWAUKEE, WIS.—Mayor Becker has signed the ordinance increasing the salary of Building Inspector Koch to \$3,000; also the ordinance increasing the salary of aldermen to \$1,000 a year.

MOBILE, ALA.—An ordinance has been introduced in Council creating a Sinking Fund for Refunding Bonds and a Sinking Fund Commission.

NEWARK, N. J.—The work of drafting the new city charter is nearly completed. There is to be a Council made up of one Alderman elected from each of the sixteen wards of the city, with the president elected at large, the extension of the term of the Mayor and making the Comptroller's office elective. A Finance Board will consist of the Mayor, President of the Council, Comptroller and two members elected at large. Many of the present co-ordinate bodies will be abolished, including the Boards of Works, Health, Police, Fire and, perhaps, Excise, and the establishing of single heads of departments in their places.

NEW YORK, N. Y.—Lawson Purdy, President of the Tax Department, has followed a new system this year in making assessments on the personal property of corporations. Hitherto it has been the practice to assess the nominal capitalization. The result was an enormous reduction by the swearing off process. This year Mr. Purdy and his colleagues have taken pains to ascertain as nearly as possible the real value of property owned by corporations subject to personal taxation, and while this policy has led to a reduction of \$1,471,492,815 on the tentative assessments for this year Mr. Purdy is confident that the amount finally held will be larger than last year.

NORFOLK, VA.—An ordinance has been passed prohibiting minors from playing pool or billiards in any public pool room of the city.

ST. LOUIS, MO.—Eight hundred men out of work paraded through the snow to the City Hall to ask Mayor Wells for his assistance in obtaining employment. The procession was orderly and the Mayor assured the men that he would do all in his power to secure work. Later the Mayor instructed Street Commissioner Travilla to prepare an ordinance calling for an appropriation of \$10,000 for street work.

TOLEDO, O.—The Committee on By-laws has submitted to Council the following resolution: recommending that

an amendment of the municipal code be adopted to provide for the initiative and referendum to municipal as well as State legislation, and that the Clerk transmit copies of the resolution to the President of the Senate and Chairman of the House of Representatives of the Legislature of Ohio and to the Senator and Representatives of Lucas County in said Legislature.

### Refuse Collection and Disposal

MASSILLON, O.—In the year 1906 street cleaning cost \$5,342, all hauling being done by hired teams. In 1907 the city spent \$800 for a team and stable, which reduced the cost of work to \$4,816, saving about \$500—not allowing for interest and depreciation. Allowing for these items the saving is large, and it is now proposed to buy another team for street work.

NEW YORK, N. Y.—Foster Crowell, the new Street Cleaning Commissioner, had a taste of the trials and tribulations of his office during the past week. Friday morning the city awoke to find itself in the grasp of a big snow storm, the first of the season, and when the snowy fleece ceased to fall over ten inches lay on the streets. The sweeping from the sidewalks doubled the amount and many of the thoroughfares soon became impassable. John R. Cavanaugh, the new contractor for Manhattan borough, got to work but found difficulty in securing trucks to cart away the piles, owing to objection of many large contracting firms to hire teams for the purpose. There was not the slightest trouble, however, in securing sufficient men, although many found themselves unable to continue at the work, owing to lack of proper clothing and for other causes. It was reported that of 4,000 men who started out at midnight, Friday, nearly one-half were forced to succumb to the cold in the lower section of the city. A moderation in the temperature served to help matters, and Contractor Cavanaugh, urged on by Commissioner Crowell, who was spurred to his utmost by the numerous complaints which poured into his office, renewed his endeavors and succeeded in relieving impediments to traffic in the business districts.

PORTLAND, ORE.—According to the annual report of Superintendent Donaldson the cost of cleaning gravel and macadam streets is \$85 a mile, hard paved streets \$5.65 a mile. The cost of street sprinkling is \$1.20 a mile. A portion of the hard pavements is cleaned every day; in the residence districts they are cleaned two and three times a week. Few of the gravel and macadam pavements are cleaned more than once a year. In the downtown districts streets are swept at night. This does not give much satisfaction because merchants sweep their stores and sidewalks into the street early in the morning. Boxes for waste placed at street corners are pronounced a great success and 100 more of them will be purchased.

### Parks and City Beauty

CHICAGO, ILL.—No city can live on beautification alone, says Mayor Busse. He is opposed to the plans of the Commercial Club and the South Park Commissioners for an outer driveway, sending to Council a message in which he argued that unless the lake front from Twelfth street to Jackson Park is preserved for harbor purposes, Chicago will see its lake commerce drifting away to ports across the Indiana State line. Council, as requested, has appointed a commission of five to make a study and a detailed report of the harbor, railway terminals, and park plans. Mayor Busse thinks that the Chicago and Calumet rivers will not furnish space to take care of commerce and that the lake front will have to be used.

CINCINNATI, O.—An ordinance has been introduced by Councilman Mullen for an issue of \$20,000 bonds, the



proceeds of which are to be used to clear up the parks. In this work it is proposed to utilize the service of men now out of employment.

DAYTON, O.—A plan has been submitted to the Board of Public Service by Commissioner Hertig to give help to a great number of Dayton men who are out of employment. The plan is to have some of the work of street and park improvements such as grading carried on by the city by day labor under the direct supervision of the Board instead of letting the work by contract. Another idea is to have the general spring cleaning done earlier than usual.

LEWES, DEL.—The newly-elected Mayor of Lewes, Dr. Thompson, is planning to give Lewes a fine park by draining Block House Pond. This would leave a ten-acre space in the centre, which he would utilize for an immense skating rink, and around it he would construct a driveway about a mile in length.

PORTLAND, ORE.—The Associated Charities is offering four hours work each day to the unemployed. The men are put to work in the city park digging and clearing away debris. In return for the work, the men are given their 15-cent meal ticket and a 15-cent bed. The expense amounts to about \$3,000 a month. The association pays the wages, and the Park Board supplies the tools and directs the work.

ST. PAUL, MINN.—The Wheelock Parkway, which will connect Lake Como and Lake Phalen along the range of low hills on the north of the city, will rival the Mississippi River Boulevard in beauty. This parkway was recently ordered by the Park Board and will come before the Board of Public Works in the near future for action in securing rights of way. The plans include a driveway 120 feet wide or more, winding along the hills for three miles and a half between the lakes. Ultimately the drive will be extended to the Indian Mounds Park.

TRENTON, N. J.—A report on preliminary plans for a park along the Assunpink creek has been received from Olmstead Brothers, Brookline, Mass. An adequate channel for the stream when at high water should first be established in order to avoid the floods which have occurred in recent years owing to partial filling of the channel. Walls should be built at the required height and at the proper distance apart. A well-regulated bed, perhaps bordered by low walls, to carry the normal flow of the stream should also be established. A path on one or both sides of the creek, for purposes of patrol, or preferably as a regular public foot passage, should be laid out. A wide walk, with benches shaded by trees, would be a desirable feature. This type of treatment would necessarily be modified at various points. Where buildings crowd close to the bank, or land values are high, the width would have to be decreased by using more walls and less of planted slopes, and by omitting the public path on one or both sides. In other places unusually wide spaces could be secured for the sake of increasing the park value by including existing trees in the scheme or varying the slopes and plantations.

#### Rapid Transit

BUFFALO, N. Y.—The working of the prepayment street cars on Niagara street has been so satisfactory that the placing of similar cars on Elmwood avenue is being considered. The earnings from the Niagara line have increased greatly and the saving is variously estimated at from \$100 to \$200 a day. The cars already in use, costing \$9,000 each, represent an investment of \$400,000.

NEW YORK, N. Y.—The first week's operation of the tunnel to Brooklyn has justified the hope of transit officials and the traveling public that it would relieve the

bridge crush to a great extent. An unexpected effect, however, has been the depletion of travel on the ferryboats. The decrease in travel on the bridge in rush hours is variously estimated at from 5 to 15 per cent. The great falling off comes in the non-rush hours when the subway is used for reaching the theatres and shopping districts. The rush travel on the bridge was 54,000 an hour and the rush travel in the subway is now 20,000, which shows plainly where the patrons of the ferries have gone. The expected congestion at the tunnel terminal at Borough Hall has materialized.

The first report of the Public Service Commission for the First District, covering the six months of its existence, has been submitted to Legislature. Marked increase in the efficiency of transportation has been brought about. It is estimated that 15,000,000 additional seats per annum have been added to the service under the Commission orders. Much attention has been given to the extension of subway construction. One move in this direction is the \$60,000,000 Broadway-Lexington Avenue line already recommended. The Commission asks to have Rapid Transit bonds exempted from the 10 per cent. debt limit.

PORTLAND, ORE.—City Council has decided that all cars of the Portland Railway Light and Power Company must be equipped with the Lambert type of fender, which has met with successful trials. An ordinance will be drawn minutely describing the fender.

PROVIDENCE, R. I.—In a message to the City Council, Mayor P. J. McCarthy charges the Rhode Island Company with neglect to provide reasonable car service. Crowded cars at rush hours, improper ventilation, and lack of proper fenders are specified in the message, which was accompanied by a resolution directing the Council committee on railroads to investigate and report within thirty days.

#### Miscellaneous

DAYTON, O.—At the request of T. J. Hefferman, Superintendent of Construction of the Department of Water, the Board of Public Service has agreed to place telephones in the residences of the assistants in order to secure emergency service.

PROVIDENCE, R. I.—This city has a poor farm property that is worth \$3,000,000, and is making so much money from it and funds devoted to support of the poor that officials do not know what to do with it. Last year receipts were \$9,000 in excess of expenditures. The city poor farm, called the Dexter Asylum, in honor of Ebenezer Knight Dexter, who founded it with a substantial part of his possessions, was established in 1827. At that time Mr. Dexter gave the city forty acres of land, and from a valuation of a few thousands this property, with other land called the "Dexter donation," which he set aside to furnish an income from which the city could draw for poor funds, if needed, has grown to \$3,000,000. The income averages about \$39,000 a year, and the poor farm has an average of about 100 inmates.

WASHINGTON, D. C.—The District Government has a much larger item than usual in the urgent deficiency appropriation submitted to Congress by the Secretary of the Treasury. The largest sum in the total of \$248,309 is in connection with furnishing the new District Building, which is almost completed, and which the Commissioners hope to move into next August. The sum of \$142,000 is asked for furnishing and equipping this building, and \$12,000 for maintenance, including firemen, engineers, watchmen, washerwomen, elevator operators, etc. Other considerable items in the deficiency appropriation are \$25,000 for completing the approaches for the Anacostia bridge, and \$9,000 for cleaning and repairing sewers.



## LEGAL NEWS

### A Summary and Notes of Recent Decisions—Rulings of Municipal Interest

#### EXCLUSIVE FRANCHISE—MUNICIPAL POWER

**Water, Light and Gas Company of Hutchinson, Kansas, Appellant, vs. City of Hutchinson et al.**—Municipal power to grant an exclusive franchise cannot be deduced from provisions of the Kansas statutes conferring, inter alia, power to provide for the general welfare, and to enable the municipality to construct water and lighting plants of its own, or to make contracts with any person or company for such purposes, and giving such person or company the privilege of furnishing light for streets, lanes or alleys for any length of time not exceeding twenty-one years—especially where the section most relied upon as conferring this power had been so amended before its attempted exercise as to omit the words, "the exclusive privilege."—United States Supreme Court.

#### STREET OPENING—ASSESSMENT OF BENEFITS

**Kansas City et al. vs. Napiecek et al.**—In the course of proceedings instituted by a city for the opening of a street and charging a part of the cost to the property within a benefit district, it is unnecessary that the description of the property referred to therein should include a statement of the city, county, or state in which it is situated. The subdivisions referred to must be understood to be those of the municipality concerned. Under the statute authorizing a part of the cost of opening a street to be charged to property especially benefitted thereby, assessments may be made against tracts not fronting thereon.—Supreme Court of Kansas.

#### DEDICATION OF STREET—INTENT

**Naylor et al. vs. City of Harrisonville et al.**—Any act by the owner of property setting apart to the public a portion of his property, clearly showing such intention, vests the use of such property in the public for the purposes indicated, and, if actually thrown open, the public may take possession thereof. The Revised Statutes of 1899, which direct the assessment of the costs of constructing sidewalks against the abutting property, without providing for a hearing as to the benefits thereto, are not in violation of Constitution 1875, providing that no person shall be deprived of property without due process of law.—Supreme Court of Missouri.

#### DEFECTIVE HIGHWAY—NOTICE OF INJURY

**Batchelder vs. White, City Treasurer.**—A notice to a City Council of a personal injury caused by a defective highway, specifying an impossible date as the time of the accident, is insufficient under General Laws of 1896, requiring notice of the time, place and cause of such accidents to be given within sixty days thereafter, though the city officials knew of the same. The giving of notice of injury caused by a defective highway in a town expressly required by General Laws of 1896, to be given the town within sixty days after the accident, being no part of a suit for such injury, but a condition precedent to the injured person's right to sue, a failure to give it may not be waived as an irregularity in process.—Supreme Court of Rhode Island.

#### TERM OF APPOINTMENT

**Monette Thompson et al. vs. State.**—Policemen are "officers" within Constitution requiring officers to be appointed for a definite time, so that an ordinance authorizing appointment of policemen during good behavior is void. Acts of 1900, amending the charter of a city, violates the Constitution, providing that the Legislature shall pass general laws under which the charters of cities may be amended; this being the only way that such amendments may be made.—Supreme Court of Mississippi.

#### INVALID EXERCISE OF CITY REGULATIONS

**Hudson & M. R. Co. vs. Mayor, etc., of City of Hoboken.**—Where a statute authorizes the doing of a certain thing in the prosecution of a public work, a city ordinance that makes the doing of such thing a penal offense, unless the permission of the city be first had, is not a valid exercise of municipal regulation.—Supreme Court of New Jersey.

#### INFORMALITY IN PASSING ORDINANCE

**Paterson & R. R. Co. et al. vs. Mayor, etc., of City of Paterson.**—On certiorari brought to review an ordinance laying out a city street across the right of way of a railroad, it appeared that, according to the terms of the charter of the city, the membership of the Board of Aldermen, which was the governing board, changed on January 1st of each year, one-half of the members going out by expiration of term and newly elected members taking their places; that every ordinance must be read three times before final passage and not more than twice at any one meeting, and must be passed by a majority of all the members. It further appeared that the ordinance in question was read twice and ordered to a third reading before the Board organized January 1, 1904, but was not finally passed by the Board until after its reorganization on January 1, 1904, a new election having intervened, involving a change in the membership. It was held that the ordinance fell with the expiration of the Board of 1903 as then organized, and that its attempted enactment later by the succeeding Board was invalid.—Court of Errors and Appeals of New Jersey.

#### INVALID ACT TEMPORARILY BINDING

**Lang vs. Mayor, etc., of City of Bayonne.**—An invalid act of the Legislature is binding on the citizens so long as it has not received judicial condemnation. A statute creating an office with prescribed duties has the force of law until condemned as unconstitutional by the courts, and in the meantime the incumbent is an officer de facto, and his acts are as potent so far as the public is concerned as are the acts of any de jure officer. A municipal corporation, created by an unconstitutional law, is a de facto corporation, and, so long as the State does not terminate its existence by direct proceeding by the Attorney General, it may exercise through its officers the powers conferred on it as completely as if it were created by a valid law, and public policy requires obedience from its citizens. The Board of Police Commissioners, created by the unconstitutional act of 1905, is a de facto board, and its action in discharging a member of the police force, prior to a decision adjudging the act unconstitutional, is valid as to the officer, and the courts will not compel, by mandamus, his reinstatement.—Court of Errors and Appeals of New Jersey.

#### COMMISSIONERS OF ASSESSMENT—INFORMALITY

**Batchelor et al vs. Mayor, etc., of Borough of Avon-by-the-Sea et al.**—Where the statute requires that the Commissioners of Assessment shall be "discreet persons, residents, and freeholders of the borough," the order of appointment must recite that fact; otherwise, the proceedings are defective. Assessments for public improvements set aside for a defect in the order appointing commissioners on account of failure to recite therein that the Commissioners were "discreet persons, residents and freeholders of the borough," but which assessment appears to have been laid upon legal principles and to be fair and just, will be reassessed by the court under the act approved March 23, 1881.—Supreme Court of New Jersey.

#### DEFECTIVE STREET

**Austin vs. City of Charlotte.**—In an action against a municipal corporation for injuries sustained by falling into an unguarded street excavation, it was shown that plaintiff left the street and started across some vacant lots to his destination. He encountered a hedge and moved along the hedge toward the street, which he knew to be excavated. The night was dark, and he was feeling his way with his feet. In working around the hedge and onto the sidewalk, which he thought was there, he fell into the excavation and was hurt. Held, that plaintiff was guilty of contributory negligence precluding recovery.—Supreme Court of North Carolina.

#### CITY EMPLOYEES—DUTIES AND NEGLIGENCE

**Higbie vs. Board of Education of City of New York.**—The doctrine of respondeat superior applies to municipal or governmental corporations in respect to duties put upon them, even though a municipal corporation may not be liable for acts or omissions of officers who by statutory direction have only duties which belong to the administration of the State government. Plaintiff was employed by the Board of Education of a city as a cleaner in a school-house under the janitor thereof, and in cleaning the water-closets with a liquid mixture, given him by the janitor for that purpose, his hands were burned. Held, the negligence, if any, was that of a fellow servant.—New York Supreme Court, Appellate Division.

**CONTRACT NOT BASED ON ORDINANCE INVALID**

**Mulligan vs. City of Lexington.**—Under the express provisions of the Revised Statutes of 1899, an ordinance requires the assent and approval of the Mayor to the action of the Council. Under the express provisions of the Revised Statutes of 1899, the Mayor is the President of the Council, and his signature to the minutes of the Council is merely an attestation of them as President, and is not an approval of the proceedings as Mayor. Under the Revised Statutes of 1899, amended by Laws 1901, empowering cities of the third class to enact ordinances for various purposes, among others to repair street pavements, etc., and providing that the cost of such work shall be included as a part of the cost of the work done on the part of the street whose improvement is provided for by the same ordinance and contract, the power to improve a street can be exercised only by ordinance, or at least by legislative action of the Council and Mayor acting in conjunction. In an action on an alleged contract, an answer referring to the contract, and alleging matter in a manner assuming a contract, is merely a reference to the contract alleged in the petition, and, where that is invalid, no binding contract is admitted by the answer. Where a contract of a city for repairing a street is invalid because not based on an ordinance, payment of a portion of the contract price under authority of a motion adopted by the Council has no effect on the contract's validity. In such case, a written demand by the Mayor, at the Council's instigation, upon the contractor, to furnish the repairing material, had no binding effect upon the city. Where an ordinance is necessary to the validity of a city's contract, it is equally necessary for a valid ratification of it.—Kansas City Court of Appeals, Missouri.

**TAXATION—ANNEXED TERRITORY**

**Mayor and City Council of Baltimore vs. Gail et al.**—The Acts of 1888 provide after the year 1900 the Baltimore county rate of taxation at the time of the passage of the act shall not be increased for city purposes on any landed property within the annex until avenues, streets, or alleys shall have been opened or constructed through the same, nor until there shall be on every block of ground so to be formed at least six dwellings or warehouses ready for occupation. The Acts of 1902 define "landed property" to mean real estate, whether in fee simple or leasehold, and whether improved or unimproved. Held, that a wholly unimproved lot bound by a street or alley on two of its four sides and contiguous to a twenty-eight-acre tract of land with no visible boundary separating it from such tract was landed property within the meaning of the acts, and hence not subject to the Baltimore city rate of taxation until it had reached the standard of development required by the act to make it urban property.—Court of Appeal of Maryland.

**SPEED LAWS—CARS AND LOCOMOTIVES**

**Indianapolis Union Ry. Co. et al. vs. Waddington.**—The Act of March 6, 1891, governing cities of more than 100,000 inhabitants, gave the right to regulate the speed of cars and locomotives, and also to secure the safety of citizens and others in the running of trains through the city, and provided that all ordinances, etc., not inconsistent with the act should remain in force until repealed by the Common Council, etc. Held, that the act did not repeal an ordinance passed in 1866, under authority of Acts Special Sessions 1865, limiting the speed of locomotives and cars. A city ordinance limiting the speed for locomotives while passing through the city did not become invalid from a failure to afterwards limit the speed of electric cars; the fact that such cars are more readily controlled than steam cars affording just ground for distinguishing between them in respect to speed.—Supreme Court of Indiana.

**TELEPHONE FRANCHISE**

**State ex rel. Smythe vs. Milwaukee Independent Telephone Co.**—The City of Milwaukee has no power to grant a franchise to a telephone company, and an ordinance dealing with the subject can only be sustained as an exercise of the police power of the city. Under the statute of 1898, providing for actions of quo warranto in the name of the State by a private person when the Attorney General refuses to act, etc., a resident, elector, and taxpayer of a city may, on refusal of the Attorney General to act, prosecute quo warranto in the name of the State to oust a domestic corporation from the exercise of a franchise attempted to be conferred on it by an invalid ordinance of the city, where the city may become involved in the expenditure of money on account of the ordinance through litigation concerning it, the purchase of the business, etc.—Supreme Court of Wisconsin.

**RESPONSIBILITY OF PARK COMMISSIONERS**

**Board of Park Commissioners of City of Louisville vs. Prinz.**—Public parks, maintained without gain, are not only exempt from taxation, but may be created and maintained by taxation, they being public places, established for public purposes; and the right of a city to support by taxation public parks rests on its duty to maintain the public health. In the absence of a statute authorizing it, an action will not lie against a municipality for the neglect of a public duty imposed on it for the benefit of the public or for the personal tort of any of its officers or agents in the performance of such public duty. In the absence of a statute authorizing it, an action will not lie against a board elected by the voters of a city, with authority to control the public parks, supported by taxation, for the negligence of its employees. A municipal corporation is not responsible for the misdoing of persons in charge of its Police or Fire Departments.—Court of Appeals of Kentucky.

**VALIDITY OF WARRANT**

**Abrahams vs. City of Omaha.**—A warrant issued by a city in consideration of a demand which is a valid obligation payable out of its general funds is not invalidated by a recital, not contemplated by the statute, that it shall be payable out of a special fund which the city is not authorized to create, or out of a special fund which the city may lawfully create, but the failure to create which is due solely to the fault or negligence of the city. A warrant issued by the proper authorities of a city in consideration of a valid indebtedness against it, is a written acknowledgment of such indebtedness and promise to pay it, and arrests the running of the statute of limitations.—Supreme Court of Nebraska.

**INJURY—PHYSICAL EXAMINATION**

**City of Cedartown vs. Brooks.**—It is within the discretion of the trial judge, upon a proper showing made therefor and at the instance and expense of the defendant in the action, to require a plaintiff, suing for physical injuries, to submit to an examination by competent physicians in order to ascertain the nature and extent and probable duration of the injury, and to afford means of proving the same at the trial of the cause. It follows that it is likewise within the discretion of the judge to refuse to allow such examination, and this discretion will not be controlled unless abused.—Court of Appeals of Georgia.

**ASSESSMENTS UNDER BARRETT LAW**

**Diven et al. vs. Burlington Savings Bank.**—Under the Barrett law relating to street improvements and assessments for the costs thereof, the owner of a bond issued by the city for such improvements in case of the default of the abutting lot owner may foreclose against back-lying lots not mentioned in the proceedings, but within 150 feet of the improvements, even though the owner of the abutting land signed a waiver of illegalities by which he promised to pay the assessment, and is not limited, therefore, to the assessment upon the abutting land as actually made and fixed by the Common Council.—Appellate Court of Indiana.

**CLAIM FOR DAMAGES—TIME LIMIT**

**Winter vs. City of Niagara Falls.**—Niagara Falls city charter provides that claims for damages founded on negligence of the city shall be presented to the Council within thirty days, or an action therefor shall be barred, and requires the Corporation Counsel to investigate claims for personal injuries. An infant injured through the negligence of the city failed to file a notice thereof within thirty days. While he was in the hospital, the Mayor called on him, sympathized with him, and the city paid the bill for hospital services. After the infant had filed a claim he was subpoenaed by a policeman of the city to appear before officers thereof. He did so and was examined by the City Attorney. Held, not to constitute a waiver of the city's right to insist that the claim had not been presented in time.—Court of Appeals of New York.

**RIGHT OF OFFICIALS TO EXTRA COMPENSATION**

**Morgan vs. City of New York.**—A messenger in the Bureau of Buildings in the City of New York, who was also Commissioner of Deeds, took the affidavits of other messengers, claiming that he was entitled to compensation from the city. The Commissioner of Buildings told plaintiff that he had no objection to his making a claim against the city for the services, and no officers of the department ever instructed him to take affidavits as a part of his duties as an employee. Held, that the court erred in directing a verdict for defendant.—Court of Appeals of New York.



## NEWS OF THE SOCIETIES

**Virginia League of Municipalities.**—The members of the League met at Richmond, January 15. One of the most important acts of the meeting was the passage of a resolution, introduced by Mayor J. Davis Reed, of Portsmouth, which was unanimously adopted, to petition the Legislature to amend Section 1244 of the Code so as to give the City Councils and Board of Supervisors a right of appeal to the Circuit Courts when property has been assessed too low. As the law stands, owners of property are given an appeal when they think their property has been assessed too high, but there is no appeal for the city or county on the reverse side of the proposition. Mayor Reed declares that he knows a number of pieces of Portsmouth real estate which are assessed too low, but under the present law the city has no redress. The next meeting of the League will be held at Portsmouth on the second Thursday in August.

**Illinois Society of Engineers and Surveyors.**—The annual convention was held at the University of Illinois, Urbana, Ill., January 15-17, about 100 members attending. Dean M. F. M. Goss of the Engineering Department delivered the address of welcome. Acknowledgment was made for the Society by J. W. Alvord. President C. W. Burdick delivered an address on the exchange of engineering knowledge. Papers read were: "Description of Concrete Sewer Work at Decatur, Ill.," by Mr. Alexander; "Cost of Sewer Construction," by G. C. Habermeyer; "Description of the Seventy-third Street Water Supply Tunnel at Chicago," by H. M. Ely; "Operation of a Mechanical Filter Plant," by C. H. Cobb; "Municipal Water Supplies from Streams of Illinois," by E. Bartow, "and "Municipal Improvements at Cairo, Ill.," by W. B. Thistlewood; "Testing Reinforced Concrete," by Prof. A. N. Talbot; "Illinois Highway Commission," by A. N. Johnson; "Highway Bridges," by C. Older; "Treatment of Macadam Roads with Tar or Bitumen," by Linn White; "Binder Course for Asphalt Pavement," by J. A. Gableman; "Creosote Blocks," by J. B. Hittell; "Development in Gas Engineering," by C. M. Garland; "Modern Power Plant Practice," by J. C. Thorp; "Metallic Filament Lamps, with Special Reference to Street Lighting," by J. M. Bryant; "Smokeless Combustion," by Prof. L. P. Breckenridge. Papers on land reclamation and drainage were read by Prof. H. F. Bain, Isham Randolph, J. G. Melliush, P. C. Knight, Jacob A. Hurman, L. B. Boswell, G. A. Ralph and J. O. Wright. Other papers were: "Engineering in Mexico," by J. W. Alvord; "Recent Improvements in Surveying Instruments," C. C. Wiley; "Concrete Monuments for Lot Corners," A. L. Webster; "Topographic Methods and Results in Illinois," W. H. Herron; "Topographic Mapping in the Bottom Lands," E. W. McCrary; "Notes on Architecture," N. C. Ricker; "Reinforced Concrete Building Construction," R. V. Engstrom; "Economic Efficiency of Rectangular Concrete Beams," F. O. Dufour; "Railway Switching Yard," G. W. Pickels; "Drainage Areas and Waterways," M. L. Eger; "Construction of South and Western Railway," J. E. Shephardson. The Society re-elected its old officers for another year.

**Indiana Engineering Society.**—The twenty-eighth annual convention was held at the Commercial Club, Indianapolis, Ind., January 16-18. Prof. W. K. Hatt, president of the Society, in his annual address, reviewed the work of the year, pointing out the advantage of a local over the large national societies. The report of the Committee on Surveying was made by J. S. Spiker, of Vincennes. The report of the Committee on Central Station, Light, Heat and Power was made by J. B. Nelson, of Indianapolis. The report of the Committee on Electrical Engineering, made by H. B. Marsh, of Indianapolis, chiefly concerned illumination. The papers read were as follows: "Cost of Gravel and Macadam Roads," by G. C. Houston, of Watsuka; "Power Gas," by Prof. G. A. Young, of Perdue University; "Report of Committee on Electric Railroads," by Robert P. Woods, of Indianapolis, Ind.; "The 1,200-Volt Direct-Current Type of Traction Power," by J. P. Moore, of Indianapolis, Ind.; "Types of Traction Cars," by Charles Heron, Indianapolis, Ind.; "Track Construction in Streets for Interurban Service," by Thomas B. Macmott, Indianapolis; "Recent Surveying Instruments," by George M. Case, of Perdue University; "Reconstructing Street Railway Tracks in San Francisco," by Thomas R. H. Daniels; "Smoke Abatement," by C. H. Benjamin, Perdue University; "Committee on Water Works," by Prof. Sackett, of Perdue University; "Relative Cost of Heating a Residence by Furnace, Hot Water and Steam," by Prof. J. D. Huffman, of Perdue University; "Sewage System of Madison Hospital," by Prof. Sackett; "Deep Waterways Convention," by F. A. W. Davis; "Concrete Structure from the Viewpoint of the Contracting Specialist," by F. A. W. Davis; "Work of the Structural Materials Laboratories of the United States Geological Survey," by R. L. Humphrey; "Test of Reinforced Concrete Floors and Concrete Beams," by Prof. W. K. Hatt.

The following officers were elected for the coming year: Prof. W. K. Hatt, President; C. C. Brown, Indianapolis, Vice-President; Charles Brossman, Secretary-Treasurer.

**Louisiana Engineering Society.**—At the annual meeting in New Orleans, January 11, the following officers were elected: President, C. W. Wood; Vice-President, J. G. Eastwood; Secretary, L. C. Dotz; Treasurer, J. C. Hough. About forty members were present, and the Secretary's report showed a gain in membership of thirty-two for the past year, making the total membership 107.

**Washington Society of Engineers.**—The development of electric railways the world over was discussed at the meeting, January 21, by Mr. H. C. Eddy, Superintendent of the Electrical Department of the District of Columbia. Mr. Eddy exhibited pictures and gave descriptions of the earliest types of electric railways, the wire carrying the current being suspended over the side of the track as was done recently at Seventh Street and Maryland Avenue, Southwest, during the railway repairs there. The hanging of the current wire in the middle of the tracks was the next development. The adoption of the three-phase system and later of the monophasic system, first tried in Germany, the speaker said, gives most promise for further development of electric lines. New lines are being built on that system, he said, the one between Washington, Baltimore and Annapolis intending to use that system.

**Pacific Northwest Society of Engineers.**—The annual meeting and banquet of the Society was held at the Lincoln Hotel, Seattle, Wash., January 17. Twenty-six members and a number of guests were present. County Engineer A. L. Valentine read a paper on the "County of King—Her Highways, Bridges and Ways of Solving a Few of Her Engineering Problems." A. H. Dimock spoke of the works accomplished in Seattle during the past year. Deputy Mineral Surveyor J. L. McPherson spoke of the "Development and Mineral Wealth of Alaska." Other addresses were: "Washington Woods—Their Uses in Construction," by Prof. A. H. Fuller; "Pioneer Engineering on Puget Sound," by James Hart; "Macadam Roads," by F. K. Adams; "A Few of the Contractor's Worries," by Samuel G. Hedges; "The Influence of the Ladies on the Engineer," by Prof. Milnor Roberts; "Members Who Have Passed Away During 1907," by J. C. Jeffery; "Organization and Pay of Field Parties," by J. J. Cryderman; "Our Growing Library," by J. D. Blackwell; "What Bellingham Is Doing," by George Gerhard; "Good Roads—Their Construction and Building," by S. C. Lancaster. President Thomas F. Kane, of the University of Washington, read a paper outlining the engineering courses of study in the university. The following officers were elected for the ensuing year: J. C. Jeffery, President; Milnor Roberts, C. A. Colby and George M. Gerhard, First, Second and Third Vice-Presidents, respectively; A. H. Dimock, Treasurer; J. D. Blackwell, Librarian; G. A. Kyle, H. Day Hanford, C. E. Fowler and E. C. Magnusson, Intown Directors; James Hart, of Auburn, J. J. Cryderman, of Bellingham, E. McCulloh and T. A. Noble, both of North Yakima, Out-of-Town Directors.

**American Water Works Association.**—The twenty-eighth annual convention will be held at Washington, D. C., May 11-16, 1908. In his announcement, President George H. Felix asks every active member to contribute something in the way of a short "experience paper" to the success of the meeting.

## Calendar of Meetings

- January 28-29.**  
**American Society for Testing Materials.**—Meeting, Engineering Building, 29 West Thirty-ninth street, New York City, and at Columbia University.—Theodore Marburg, Secretary, University of Pennsylvania, Philadelphia, Pa.
- January 28-30.**  
**Canadian Society of Civil Engineers.**—Annual meeting, Montreal, P. Q.—Prof. C. H. McLeod, Secretary, 577 Dorchester street, Montreal.
- January 31.**  
**Highway Alliance.**—Annual meeting, Room 47, 206 Broadway, New York City.—John T. Mulhall, Secretary.
- February 3-4.**  
**American Ceramic Society.**—Twenty-second national convention, Hartman Hotel, Columbus, O.—Theo. A. Randall, Secretary, Indianapolis, Ind.
- February 3-4.**  
**National Paving Brick Manufacturers' Association.**—Southern Hotel, Columbus, O.—Theo. A. Randall, Secretary, Indianapolis, Ind.
- February 11-12.**  
**Connecticut Society of Civil Engineers.**—Annual meeting, New Haven, Conn.—J. T. Jackson, Secretary, New Haven.
- February 11-13.**  
**Ohio Engineering Society.**—Annual meeting, Great Southern Hotel, Columbus, O.—E. G. Bradbury, Secretary, 85 North High street, Columbus, O.



## PERSONALS

BLAKE, D. P., Mayor of Concord, Ga., has been elected for a third term, with R. A. Mallory, Mortimer Smith, and J. H. Strickland as members of the Council.

BROWNING, R. C., has been elected Mayor of Locust Grove, Ga., and C. V. Williams, J. L. Gardner, C. H. Costellow, W. I. Parr and W. E. Combs as Aldermen.

LICHT, LOUIS J., member of the Board of Public Works of Geneva, N. Y., for six years, has been elected President of the Board.

LOCHRIDGE, E. E., City Engineer of Springfield, Mass., recently made a visit to New York to examine plans for the new filter beds, etc., to be constructed in connection with the new Little River water supply, which is to cost about \$275,000, and for which bids will be invited in a week or so.

LUSTER, WILLIAM H., Jr., City Engineer of Elizabeth, N. J., has been reappointed.

MCGARRY, JOHN J., Alderman of Putnam, Conn., has been elected Mayor of the city by the Board of Aldermen, to succeed C. J. Bradway, who was elected by two majority at the city election several weeks ago, and was forced to decline on account of failing health.

MADDOCKS, H. L., formerly County Engineer of Licking County, O., has become Bridge Engineer of Muskingum County, O., with headquarters at Zanesville.

MANSON, MARSDEN, San Francisco, Cal., has been elected City Engineer by the Board of Public Works, to succeed Thomas P. Woodward, and the salary fixed at \$5,000 a year. Mr. Manson has been the city's representative in its claims before the Federal Government of water rights in the Hetch Hetchy and Lake Eleanor districts, and for many years has been identified with the effort to secure a Sierra supply for San Francisco.

MASON, SAMUEL, JR., City Surveyor and Engineer of Perth Amboy, N. J., has been placed on a salary of \$3,000 per annum by the Board of Aldermen, and his duties defined as keeping a record of all maps, sewers and such, to be at the call of any of the city departments; the office has been a fee one, and it is expected \$5,000 a year will be saved by making it a salaried one.

MEADOWS, HAROLD G., Buffalo, N. Y., a stock broker, has been appointed by Mayor James N. Adam as a Park Commissioner to succeed George C. Ginther; Charles B. Smith, managing editor of the Buffalo Courier, as School Examiner, to succeed Arthur W. Heckman, and Frank L. Beyer as member of the Board of Plumbing Inspectors, to succeed himself.

MURTAUGH, JOHN F., City Attorney, of Elmira, N. Y., has been re-elected by the City Council by a vote of 11 to 1.

NELL, LOUIS, noted map maker and civil engineer, died recently at Denver, Col., where he went from Washington, D. C., about fifteen years ago on account of his health; he was born in Altkirchen, Germany, January 3, 1843; was a graduate of a German university and spoke seven different languages; he was for a quarter of a century a resident of the District of Columbia, and went west as an attache of the U. S. Surveyor General's office.

O'BRIEN, ARTHUR, member of the Fort Orange Construction Company, Troy, N. Y., was recently appointed City Engineer of Utica, N. Y.

OLCOTT, MARVIN, member of the Board of Public Works of Corning, N. Y., has been reappointed by Mayor Thomas A. McNamara; George B. Pettingill as Fire Commissioner, to succeed J. Towner Hoyt;

Frank H. Ferris, reappointed City Clerk; Herman Jacoby and Luman S. Conover as members of the Board of Health; all were confirmed by the Board of Aldermen, but a number of other appointments, including that of Francis E. Wood for City Attorney, were not confirmed, and Francis C. Williams will hold over.

OWEN, KENNETH, Engineer of Montclair township, N. J., has been reappointed.

PEER, SYLVESTER, Hightstown, N. J., has been appointed Engineer of Water Works by Mayor John R. Shangle and confirmed by Council; also A. V. Pierson as member of the Board of Health and R. A. Outcalt, Recorder.

POND, CHARLES B., has been appointed Commissioner of Public Works of Schenectady, N. Y.

RAFTER, GEORGE W., Consulting Engineer, Rochester, N. Y., died suddenly at Carlsbad, Austria, recently. Mr. Rafter is perhaps best known for his work as a Sanitary Engineer and as a writer on engineering and allied subjects. While in the earlier years of his career he engaged in railroad and general engineering work, his later years were devoted mainly to the study of public water supplies. He was employed as Sanitary Expert on the Boston water works in 1889 and 1890; in 1893-4 he was engineer in charge of the Genesee Valley storage reservoir survey; in 1898 he was in charge of the water supply division for the United States Board of Engineers on Deep Waterways; in 1899 he was Consulting Engineer to the New York State Canal Commission, and since 1900 he had been in private practice.

ROBINSON, CHARLES MULFORD, Rochester, N. Y., a landscape artist, has been appointed a member of the Park Board of the city.

ROBINSON, H. L., Mayor of Princeton, N. J., has nominated the following officers who were confirmed by the Council: Borough Clerk, M. W. Hubbard; Attorney, P. A. V. Van Doren; Street Commissioner, John A. Stead; Overseer of the Poor, A. L. Green; Marshal, William Kilfoil; First Assistant Marshal, Robert F. Height; Assistant Marshal, Bert. J. Hunt; members of the Board of Health, Joseph S. Hoff, Richard Rowland.

SELBY, J. F., Mayor of Hillsboro, N. D., dropped dead in a saloon in Moorhead recently; he had been in Fargo and Moorhead on business; he was a prominent attorney and Mason and was a member of the Constitutional convention.

SMITH, H. J., has been elected City Engineer of Putnam, Conn.

STARRETT, J. A., formerly assistant to Mr. P. H. Weber, Civil Engineer, Canton, O., has been appointed City Engineer of Canton.

STEWART, JAMES, and David Reffe have been appointed City Engineer and Chief Engineer of Water Works, respectively, of Cincinnati, O.

THOMS, WILLIAM E., Mayor of Waterbury, Conn., has announced the following appointments, which have been confirmed:

Board of Public Works: Peter Hoek, Robert Dennison, Thomas B. Walker (alderman), Peter Lawlor (alderman), Martin Scully (alderman).

Board of Public Safety: William J. Spain (alderman), Henry W. Minor, John Griffin, Herbert J. Phillips, Franklin A. Taylor.

Board of Public Health: John D. Freney, Robert W. Mackie (alderman), Edward J. Finn, Henry E. Hungerford, Thomas Bland.

Board of Finance: Martin Scully (ex-officio), Michael D. Russell (ex-officio), Isadore Chase, Archie E. Lord, Edward M. McElligott.

Board of Public Charities: Edward J. Donahue, Daniel J. Murphey, Hosea B. Jillson, Louis E. Fitzsimons (alderman), Ferdinand Wolff.

President of Board of Aldermen, Martin Scully; Vice-President, John F. Gallagher.

## TRADE NOTES

**Cast Iron Pipe.**—About 6,500 tons of pipe will soon be ordered by cities in the Northwest. Quotations: Water pipe, 4-inch, \$31; 6 to 12-inch, \$30; 16-inch and up, \$29, with \$1 extra for gas pipe. Birmingham price firmer. Quotation: 4 to 6-inch, \$30; 8 to 12-inch, \$28; over 12-inch, average \$26, with \$1 extra for gas pipe. New York: General conditions not improved; no large lettings in sight. Quotations: Carload lots of 6-inch, \$26 to \$27 per ton at tide water.

**Pig Lead.**—To meet a cut to 3.80 by outside interests, the American Smelting and Refining Co. is quoting lead at 3.75 cents.

**Roll Jaw Crushers.**—The Sturtevant Mill Company, Boston, Mass., states in bulletin 109 that improved construction and an extended business have made it possible to halve the weight and halve the cost of Roll Jaw Crushers without sacrificing quality in any design. The new construction facilitates the production of large-sized breakers. A great gain in portability has been attained. The largest breakers can now be knocked down to a size that two men can handle. The manufacturers claim that a 20,000 pound portable roll jaw duplex balanced crusher will do more work than a 60,000 pound cast-iron crusher. The largest of these crushers has a receiving opening 7 x 48 inches, opening between jaws of 1-2-inch, a capacity of 8 to 12 tons an hour, and weight of single heaviest piece 2,100 pounds.

**Engineering Instruments.**—It is reported that the Bausch & Lomb Optical Co., Bausch, Lomb, Saegmuller Co., of Rochester, N. Y., and the Carl Zeiss Optical Works, of Jena, Germany, have united their interests, with the purpose of carrying to the highest possible development the production of optical, physical and engineering instruments.

**Wood Paving.**—Creosote wood block as paving material is being laid on York street, Norfolk, Va., to replace the asphalt. The wood block paving is made by the United States Wood Preserving Plant in South Norfolk. Several schooner loads of the material have left this port since last September, and it is stated that there are sufficient orders for the paving block to keep the plant operating for the next two years, even if no additional orders are received in the meantime.

**Series Luminous Arc Rectifier System.**—Bulletin No. 4556 of the General Electric Company, Schenectady, N. Y., describes the system of operating direct current luminous arc lamps from alternating current stations with high economy and with extreme simplicity. The combination of this new lamp with the efficient transformation of alternating current into direct current by means of a mercury arc rectifier gives a novel and practical solution of one of the principal illuminating problems.

**Rubber Hose.**—The Peerless Rubber Manufacturing Company has recently opened a new retail department at No. 88 Chambers street, New York City, which connects with the present store at No. 16 Warren street. Owing to their somewhat limited space the company had not been able to carry a large stock, but with the additional store will always have on hand a full and complete line of mechanical rubber goods to fill immediate demands.

## THE WEEK'S CONTRACT NEWS

Relating to Municipal and Public Work—Street Improvements—Paving, Road Making, Cleaning and Sprinkling—Sewerage, Water Supply and Public Lighting—Fire Equipment and Supplies—Buildings, Bridges and Street Railways—Sanitation, Garbage and Waste Disposal—Police, Parks and Miscellaneous—Proposals and Awards

To be of value this matter must be printed in the number immediately following its receipt, which makes it impossible for us to verify it all. Our sources of information are believed to be reliable, but we can not guarantee the correctness of all items. Parties in charge of proposed work are requested to send us information concerning it as early as possible; also corrections of any errors discovered.

### BIDS ASKED FOR

STATE	CITY	RECEIVED UNTIL	NATURE OF WORK	ADDRESS INQUIRIES TO
<b>Street Improvements</b>				
New York	New York	January 30, 11 A.M.	Paving, grading, walks, curbing, etc., streets in Bronx.	Louis F. Haffen, Boro. Pres.
Missouri	Kansas City	January 30, 11 A.M.	Asphalt pavement, portions 11 sts.; art. stone curb, 19 sts.; brick paving, 7 sts.; repairing asphalt, 6 sts., etc.	E. A. Harper, City Engineer.
Ohio	Columbus	January 30	Brick paving, curb, sub-drains, etc., 8 sts.	E. F. McGuire, Secy. Bd. Pub. Serv.
Massachusetts	Attleboro	February 1, 2 P.M.	Constructing South Attleboro road, inc. 36,000 cu. yds. excavation, 38,000 cu. yds. fill.	H. F. Conant, Engineer.
Michigan	Pontiac	February 1	Constructing 2 miles of State reward gravel roads.	Geo. H. Fowler, Highway Com'r.
Ohio	Newark	February 1	Constructing 3 miles brick paving, sandstone curb and gutter.	C. H. Wells, City Engineer.
Pennsylvania	Kennett Square	February 1	Constructing 1,144 ft. stone paving, S. Broad and Birch Sts.	Edward Ladley, Chm. St. Com.
Indiana	Lebanon	February 3, 10 A.M.	Constructing 4 gravel roads, 22,809 ft. long.	E. F. Hendrich, Co. Auditor.
Indiana	Crawfordsville	February 3, 11 A.M.	Improving Duckworth gravel road, Union township.	Bennet B. Engle, Co. Auditor.
Indiana	Vernon	February 3, 11 A.M.	Constructing 5,000 ft. pipe road, Vernon and Center townships.	Harry Hinchman, Co. Com'r.
Ohio	Youngstown	February 3, 11 A.M.	Grading McCartney Hill in Coitsville township.	Will B. Jones, County Auditor.
Indiana	Salem	February 3, 1:30 P.M.	Constructing 4 roads, 94,395 ft. long, 4 townships.	Sam G. Ellis, County Auditor.
Pennsylvania	Harrisburg	February 3	Constructing 25,035 ft. road, 16 ft. wide, Newtown Road; also road 41,088 ft. long, in 5 townships.	Jos. W. Hunter, St. Hwy. Com'r.
Pennsylvania	Glen Olden	February 3	Constructing cement sidewalks.	Chairman, Sidewalk Com.
Indiana	Columbus	February 4, 10 A.M.	Constructing 7,392 ft. gravel road in Union township.	John M. Davis, Co. Auditor.
Madison	Madison	February 4, 10 A.M.	Constructing macadam road 8,456 ft. long, Monroe township.	G. F. Crozier, County Auditor.
Indiana	Brookville	February 4, 1 P.M.	Constructing 2 macadam roads, Roy and Laurel townships.	Chas. A. Miller, Co. Auditor.
Indiana	Washington	February 4, 2 P.M.	Constructing 6 gravel roads.	Thomas Nugent, Co. Auditor.
Indiana	Paoli	February 4, 2 P.M.	Bldg. 3 gravel roads: 6, 225 ft.; 10, 880 ft.; 15, 681 ft. long.	Alvin B. Ham, Co. Auditor.
Pennsylvania	Erie	February 4, 3 P.M.	Brick paving, concrete walls, etc., steamboat landing.	H. T. Leasure, Sec'y Dock Com.
Montana	Billings	February 4, 5 P.M.	Constructing 86,653 sq. yds. gravel macadam, 7,000 lin. ft. sewer, complete, etc., 17,400 lin. ft. gutter, complete.	J. D. Matheson, City Clerk.
Montana	Billings	February 4, 8 P.M.	Constructing 6,305 sq. yds. shale brick pavement.	J. D. Matheson, City Clerk.
Indiana	New Albany	February 6, 10 A.M.	Constructing gravel road in Georgetown township.	Julian L. Miller, Co. Auditor.
Indiana	Brazil	February 6, 11:30 A.M.	Bldg. 3 stone roads: 33, 267 ft.; 10, 675 ft.; 5, 285 ft.	James L. Burns, Co. Auditor.
Pennsylvania	Washington	February 6, noon	Repairing, restoring, resurfacing roadway, cleaning, repairing culverts, etc.; 8 miles of 3 roads.	Wm. Wylie, Co. Road Eng'r.
Indiana	Rockville	February 6, 1 P.M.	Constructing 7 gravel roads in Howard township.	H. A. Henderson, Co. Auditor.
Michigan	Manistee	February 6, 2 P.M.	Brick, etc., 6,500 sq. yds. on concrete, 3,800 ft. curb, etc.	Geo. B. Pike, City Surveyor.
Maryland	Ft. Washington	February 7, 11 A.M.	Constructing macadam roads at post.	Constructing Quartermaster.
Ohio	Tiffin	February 8	Wood block floor and sidewalk Wash. St. bridge, cost \$33,000.	R. R. Bowr, County Auditor.
Ohio	Ottawa	February 8	Constructing stone roads.	J. T. Maillou, Co. Surveyor.
Pennsylvania	Pittsburg	February 10, noon	38,000 tons ballast and screenings for improved roads.	F. P. Booth, Co. Comptroller.
Indiana	Bedford	February 10, 1 P.M.	Constructing 5 macadam roads, 25,816 ft., Marion twp.; road, 1,862 ft. long, Spice Valley township.	Walter G. Owens, Co. Auditor.
Tennessee	Nashville	February 10	Paving, riprap, exc., Colbert Shoals Canal, Riverton, Ala.	Wm. H. Harpe, Maj. Eng'rs.
Missouri	St. Louis	February 11, noon	Improving and reconstructing various streets.	W. B. Dryden, Sec'y Bd. Pub. Impt'
New York	North Olean	Feb'y 13, 7:30 P.M.	Paving Union St., inc. 16,000 sq. yds. brick on concrete, with excavation, curbing street inlets, etc.	Knight & Hopkins, Rome, Engrs.
Michigan	Muskegon	February 15, 10 A.M.	Furnishing crushed limestone or fieldstone f. o. b.	County Road Commissioners.
New York	Madison Bar'ks.	February 15, 2 P.M.	Constructing 6,000 ft. concrete sidewalks.	R. W. Drury, Con. Q. M. U. S. Army.
California	Santa Monica	February 15	Asphaltum, 2,000 sq. yds. on concrete, inc. curb, etc., \$6,000.	Thomas H. James, City Engineer.
Washington	Aberdeen	February 19, 5 P.M.	Dyking 5,100 cu. yds.; filling, 1,458,200 cu. yds. in certain streets and alleys; separate bids.	H. W. Troutman, City Eng'r.
Utah	Salt Lake City	February 21	Improving First South St.	F. J. Leonard, Chm. Bd. Pub. Wks.
Indiana	Terre Haute	February 22, 11 A.M.	Constructing 2 miles 415 ft. gravel road, Henry Creek twp.	Nathan G. Wallace, Co. Auditor.
Tennessee	Fayetteville	March 2, 7 P.M.	Grading and constructing 4 or 5 miles of sidewalks, asphalt or concrete, not less than 4 1/2 ft. wide; begin May 1	D. M. Goodner, Mayor.
Maine	Fort Williams	March 2	Grading at Fort Williams.	Capt. F. J. Morrow, U. S. A., Port'l'd.
<b>Water Supply</b>				
Pennsylvania	Philadelphia	January 30, noon	Boiler equipment for Roxborough pumping station; also shelter-houses for Torresdale filters.	Geo. R. Stearns, Dir. Pub. Works.
California	Soldiers' Home	January 30	Bldg. concrete dam at pumping plant.	T. J. Cochrane, Treas. N. H. D. V. S.
Minnesota	Minneapolis	January 31	Furnishing 2,000 tons cast-iron water pipe, hydrants, valves, etc.	Andrew Rinker, City Engineer.
Colorado	Las Animas	February 1	Constructing water works, to cost \$67,000.	W. R. Murphy, City Engineer.
New York	Staatsburg	February 1	Three miles of piping, dam for reservoir, etc.	B. H. Brevort, 54 Market St., Poughkeepsie, Engineer-in-Charge.
New York	Yonkers	February 3, 9 A.M.	Furn., etc., 200 3/4-in., six 3/4 and six 1-in. water meters; also various quantities, pipes and castings.	J. D. McIntyre, Sec'y Bd. C. & S.
Massachusetts	Marion	February 3, 7 P.M.	Furn. materials and bldg. standpipe, 20 x 100 ft.	L. E. Hawes, 101 Tremont St., Bost'n.
Massachusetts	Lawrence	February 3	Furnishing 1,600 ft. 12-in. c. i. pipe, 300 ft. 8-in., 6,000 ft. 6-in., 500 ft. 4-in.; also 10 tons of pig lead.	J. J. Desmond, Pres. Water Bd.
North Dakota	Minot	February 3	Constructing water plant; estimated cost, \$150,000.	City Clerk.
Michigan	Berrien Springs	February 10	Bldg. system of water works, inc. 2 motor-driven pumps, 3 miles of mains, 26 hydrants, 20 valves, etc.	Water Department.
Indiana	South Bend	February 12	Furnishing not less than 250 or more than 750 tons pipe.	Capt. L. F. Garrard, Q. M., U. S. A.
Alabama	Port Morgan	February 14	Extension water distribution system at post.	R. W. Drury, Con. Q. M., U. S. A.
New York	Madison Bar'ks.	February 15, 2 P.M.	Constructing 300,000-gal. steel tank.	John H. Steck, City Clerk.
Iowa	Washington	February 17, 7 P.M.	Constructing deep well, 1,800 to 2,400 ft. deep.	
<b>Sewerage</b>				
New York	Brooklyn	January 29, 11 A.M.	Sewers, 3 streets: 2,200 ft. 12-15-in. pipe; 115,500 ft. bracing, etc.	Bird S. Coler, Boro. President.
New York	New York	January 29, 2 P.M.	Reconstruction and extension various sewers.	Henry S. Thompson, Act. Boro. Pres.
New York	New York	January 30, 11 A.M.	Constructing sewers various sts., Boro. Bronx.	Louis F. Haffen, Pres. Boro. Bronx.
Missouri	Kansas City	January 30, 11 A.M.	Constructing sewers in portions of 11 streets.	E. A. Harper, City Engineer.
Ohio	Columbus	January 30	Constructing sewers in certain streets.	E. W. Hirsch, Sec'y Bd. Pub. Serv.
Ohio	Canton	January 31, noon	Constructing sanitary sewers in 3 sts., 1 alley.	W. E. Sarver, City Engineer.
Michigan	Jackson	January 31, 7:30 P.M.	Furn. 5,000 ft. 20-48-in. rein. concrete sewer pipe.	J. F. Harrison, Supt. Pub. Works.
New York	Buffalo	January 31	Laying 10-in. tile sewer Scott St.; 12-in. Fulton St.; 15 x 12-in. Sunny Side Pl.; 42-in. brick sewer, Caroline St.	F. G. Ward, Com'r Pub. Works.
Illinois	Woodstock	January 31	Bldg. 65,550 ft. 20-6-in. sanitary sewers, 280 manholes, 20 flushtanks, concrete settling tank and dosing chamber, 8 sand filter beds, 50 x 55 ft.	W. S. Shields, Hartford Bldg., Chicago.
Oklahoma	El Reno	February 1	Constructing 6,000 ft. of sewers.	L. G. Adams, City Clerk.
Wisconsin	Oshkosh	February 1	Furn. material and constructing sewer outlet protections for 17th, 18th and 19th St. sewers.	W. A. Marden, Chm. Bd. Pub. Wks.
Illinois	Monticello	February 1	Constructing sewers: First Dist., cost, \$980; Second, \$1,500.	W. F. Dodge, City Engineer.
Ohio	East Liverpool	February 3, noon	Constructing concrete sewers, Daisy and Sycamore alleys.	A. S. Hughes, Clk. Bd. Pub. Serv.



## Sewerage—Continued.

Michigan.....	Tecumseh.....	February 4, 1 P.M....	Labor and material pipe sewer; 1,020 ft. 15-in.; 500 ft. 12-in.; 11,348 ft. 10-in.; 28,227 ft. 8-in.; 14,674 ft. 6-in., etc.....	W. L. Jones, Clk., Bd. Trus. J. D. Matheson, City Clerk. E. L. Williams, City Clerk. H. E. Moody, City Clerk.
Montana.....	Billings.....	February 4, 5 P.M....	Sewer, 3,000 lin. ft., 12 manholes, 15 catch basins, etc.....	
Wisconsin.....	Appleton.....	February 4.....	Constructing sewers.....	
Missouri.....	Cartersville.....	February 6, noon....	Constructing 12,000 ft. of public sewers.....	
Washington.....	Seattle.....	February 8.....	Bldg. north trunk sewer, 29,894 ft. brick or concrete, 36 to 138 in., inc. manholes, 20,000 lbs. extra steel, etc.....	R. H. Thompson, City Engineer. A. E. Rhodes, City Clerk.
Pennsylvania.....	New Castle.....	February 10, 8 P.M....	Constructing 5th Ward storm sewer, Mill St. to river.....	
Mississippi.....	Hattiesburg.....	February 10, 8 P.M....	Constructing sanitary sewers: 2,090 ft. 12-in., 15,150 ft. 8-in.; 7 flush tanks, 900 cu. yds. exc., 45,000 ft. B. M. foundation lumber, 2,640 ft. 15-in. sewer, 8,550 ft. 10-in., 90 manholes, 20 cu. yds. concrete masonry, 140,000 ft. B. M. sheeting left in trench.....	J. H. Putnam, City Engineer.
Ohio.....	Hamilton.....	February 18.....	Constructing Crawford run sewer and ditch, 3 Sections: 1st, from river, 994 ft. to Peck Ave., cost \$10,802.70; 2d, to waere closed sewer begins, 3,600 ft., cost \$10,207.40; 3d, closed sewer, 2,700 ft. long, cost \$50,708.10.....	County Commissioners. Capt. H. L. Pettus, Q. M., U. S. A.
Dist. of Col'bia.....	Takoma Park.....	February 24.....	Constructing sewer system on Armory hosp. reserv., inc. sewage tank, pump pit, pumps and motor.....	

## Public Buildings

New York.....	New York.....	January 29, 10 A.M....	Furnishing lumber and building materials.....	Theo. A. Bingham, Police Com'r.
Michigan.....	Mt. Pleasant.....	January 30, noon....	Erecting physical training bldg., Cen. Mich. Normal School.....	Luther L. Wright, Sec'y, State Bd. Ed.
Illinois.....	Garrett.....	January 30.....	Furn. material and bldg. 4-room brick slate-roofed school.....	B. L. Hulsebus, Peoria, Archt.
Indiana.....	Terre Haute.....	January 31.....	Erecting addition to Highland School; cost, \$22,000.....	J. G. Vrydaugh, Architect.
Nebraska.....	Omaha.....	January 31.....	Erecting tuberculosis ward at County Hospital.....	D. M. Haverly, County Clerk.
Wisconsin.....	Madison.....	January 31.....	Plans, etc., for school bldgs.; not over 4 rooms.....	C. P. Carey, St. Supt. Pub. Inst.
Montana.....	Thompson Falls.....	February 1.....	Furn. material and bldg. high school; J. H. Kennedy, Missoula, Architect.....	
Michigan.....	Flint.....	February 1.....	Erecting City Hall; cost between \$65,000 and \$75,000.....	D. V. Herviott, Clk., Sch. Trus., District 2.
Indiana.....	Anderson.....	February 1.....	Bldg. 2-story high school, 165 x 200 ft.; cost, \$125,000.....	Van Leyen & Schilling, Detroit, Arch.
Minnesota.....	Faribault.....	February 1.....	Erecting addition to school for deaf; cost, \$35,000.....	School Board. City Clerk.
Indiana.....	Terre Haute.....	February 1.....	Constructing 2-story additions to 3 school bldgs.....	J. G. Vrydaugh, Architect.
Georgia.....	Cairo.....	February 1.....	Erecting \$40,000 County Court House; also \$13,000 jail.....	Alex. Blair, Macon, Architect.
Illinois.....	E. St. Louis.....	February 1.....	Erecting school, to cost \$65,000.....	Riester & Rubach.
North Carolina.....	Durham.....	February 1.....	Erecting \$140,000 hospital, donated by Geo. W. Watts.....	Kendall, Taylor & Stevens, Boston, Mass.
Massachusetts.....	Greenfield.....	February 1.....	Erecting superstructure Conway Street school.....	School Bldg. Committee.
Illinois.....	Chicago.....	February 3, 1:30 P.M....	Radiator shields, etc., Cook County Court House.....	Wm. McLaren, Supt. Pub. Serv.
California.....	San Diego.....	February 3.....	Erecting \$85,000 grammar school for Board Education.....	John C. Austin, Los Angeles, Archt.
Connecticut.....	New Haven.....	February 3.....	Alterations and additions to Horace Day School.....	G. T. Hewlett, Sec'y Bd. Educn.
Mississippi.....	Tunica.....	February 3.....	Making repairs on County jail and jail cells.....	F. L. Hope, Clk. Bd. Supervisors.
Maine.....	Portland.....	February 3.....	Erecting school, Spring St.; also heating and plumbing.....	Fred. A. Thompson, Architect.
Florida.....	Mayo.....	February 3.....	Building County Court House; 2-story, limestone and brick, 64 x 92 ft.; costing about \$47,000.....	E. C. Horsford, Atlanta, Ga., Arch.
Iowa.....	Sioux City.....	February 3.....	Building 6-room and basement addition to Irving Sch.; heat, etc.....	F. C. Prescott, Sec'y Bd. Educ.
Kansas.....	Washington.....	February 3.....	Erecting \$12,000 high school.....	W. T. Willman, Lawrence, Archt.
Wisconsin.....	Madison.....	February 4, noon....	Furn. carpenter work, mason work, stone and marble work, heating, etc., plumbing, etc., wiring of Capitol.....	Geo. B. Post & Sons, N. Y. City, Architects.
New York.....	New York.....	Feb. 4, 2:30 P.M....	Completion of abandoned contract for new municipal lodging house; also of boiler pit, foundation work, etc.....	Robt. W. Hebbard, Com'r Charities.
Indiana.....	Salem.....	February 5, 7:30 P.M....	Erecting joint graded high school building.....	E. F. Routh, Architect.
Kansas.....	Fort Riley.....	February 6, 10 A.M....	Constructing several bldgs., etc., at post.....	Capt. W. W. Whitman, Q. M.
Indiana.....	Goshen.....	February 6, 2 P.M....	Alterations, etc., Elkhart Co., Court House.....	D. O. Batchelor, Co. Auditor.
New York.....	Springville.....	February 6.....	Building \$75,000 school; also heating and ventilating.....	E. E. Joralemon, Niag. Falls, Arch.
Virginia.....	Fort Monroe.....	February 7, 10 A.M....	Constructing 10 sets officers' quarters, complete.....	Capt. Ernest R. Tilton, Q. M.
Missouri.....	Bloomfield.....	February 7, noon....	Furn. material, bldg. addition, etc., to Co. Court House.....	J. N. Punch, County Clerk.
Indiana.....	Auburn.....	February 7, noon....	Constructing new County Asylum.....	County Commissioners.
Illinois.....	Clinton.....	February 7, 8 P.M....	Erecting new high school building.....	Spencer & Temple, Champaign, Arch.
North Dakota.....	Cheyenne.....	February 7.....	Erecting 4-room school building.....	J. E. Johnson.
Pennsylvania.....	Norristown.....	February 7.....	Materials, etc., for erecting \$60,000 hospital building.....	John L. West, Steward, St. Hosp. Ins.
Minnesota.....	Rochester.....	February 8.....	Erecting \$50,000 nurses' dormitory.....	City Clerk.
Minnesota.....	Fergus Falls.....	February 8.....	Bldg. \$10,000 extension to contagious disease hospital; also plumbing and heating 2 asylums, \$5,000 each.....	State Board of Control, St. Paul.
Ohio.....	Youngstown.....	February 8.....	Constructing Court House for Mahoning County.....	J. Stambaugh, Chm. Co. Com'rs.
Ohio.....	Norwalk.....	February 10, noon....	Repairing Co. Court House, inc. new sanitary closets.....	F. O. Ronk, Co. Auditor.
Alabama.....	Seale.....	February 10.....	Remodeling County Court House.....	T. F. Lockwood, Columbus, Ga. Arch.
Ohio.....	Cleveland.....	February 10.....	Sanitary work, etc., 5 schools: sheet metal work, etc., one.....	Geo. Myers, Clk., Bd. Education.
Kentucky.....	Hickman.....	February 10.....	Erecting \$10,000 library, Bd. Educ'n, S. K. Davidson, Sec'y.....	Whitfield & King, N. Y. City, Archts.
Tennessee.....	Chattanooga.....	February 11, 3 P.M....	Erecting, complete, extension to Federal Building.....	James Knox Taylor, Wash., D. C.
Texas.....	Big Springs.....	February 11.....	Erecting 2-story County Court House.....	Lang & Wittichell, Dallas, Arch.
Missouri.....	Warrensburg.....	February 11.....	Erecting training school, etc., State Normal School.....	Miller & Opel, Jefferson City, Archts.
Pennsylvania.....	Norristown.....	February 11.....	Erecting \$125,000 agricultural building.....	A. M. Brown, Sec'y Mich. Ag'l Col.
West Virginia.....	Bluefield.....	February 14, 3 P.M....	Constructing, complete, Federal Building.....	James Knox Taylor, Wash., D. C.
North Dakota.....	La Moure.....	February 14.....	Erecting County Court House.....	Buechner & Orth, St. Paul, Minn., Architects.
Kentucky.....	Owensboro.....	February 15.....	Erecting 8 room school, G. T. Horn, Chm. Bd. Educ'n.....	R. A. Bradley, Am. Cent. Life bldg., Indianapolis, Ind., Archt.
Minnesota.....	Mankato.....	February 15.....	Erecting \$65,000 normal school.....	State Board of Control, St. Paul.
Minnesota.....	St. Peter.....	February 15.....	Erecting \$65,000 tuberculosis hospital.....	State Board of Control, St. Paul.
Arkansas.....	Conway.....	February 15.....	Erecting a \$40,000 school building.....	City Clerk.
Michigan.....	Detroit.....	February 15.....	Building brick police station; also plumbing and heating.....	Louis Kamper, Fine Arts Bldg., Arch.
Ohio.....	Cincinnati.....	February 17, noon....	Erecting \$750,000 high school, 272x102 ft., whole or separate; also heating and ventilating system, Westwood School Bldg.....	Dr. J. M. Withrow, Bd. Educ.
Utah.....	Ogden.....	February 17, 3 P.M....	Constructing addition to Federal Building.....	James Knox Taylor, Wash., D. C.
Texas.....	Alpine.....	February 17.....	Erecting 2-story brick, stone or concrete school.....	H. T. Phelps, San Antonio, Archt.
Virginia.....	Richmond.....	February 17.....	Bldg. addition to Fairmount School; also heating system.....	A. F. Hunt, 1107 E. Main St., Archt.
Iowa.....	Des Moines.....	February 18, noon....	Erecting \$20,000 administration building, State Fair Grounds.....	J. C. Simpson, Sec'y St. Bd. Agr.
New Mexico.....	San Juan.....	February 18, 2 P.M....	Erecting school bldg. and hospital, San Juan School.....	Wm. T. Shelton, Shiprock, Supt.
Ohio.....	Columbus.....	February 18, 3 P.M....	Erecting addition, remodeling, etc., Federal Building.....	James Knox Taylor, Wash., D. C.
Wisconsin.....	La Crosse.....	February 18.....	Bldg. normal school; cost, \$200,000.....	Van Ryn & De Gelleke, Milwaukee.
Arkansas.....	Pine Bluff.....	February 21, 3 P.M....	Constructing, complete, U. S. Post Office.....	James Knox Taylor, Wash., D. C.
Massachusetts.....	S. Hadley Falls.....	February 22.....	Competitive plans for combination Town Hall and School bldg; also for 4-room school, with assembly hall, etc.....	M. J. Judge, Sec'y Sp. Com.
Virginia.....	Port Myer.....	February 24.....	Erecting 21 sets officers' quarters, barracks, etc.....	Capt. B. B. Hyer, Q. M., U. S. A.
Wisconsin.....	Marinette.....	February 25, 3 P.M....	Constructing U. S. Post Office.....	James Knox Taylor, Wash., D. C.
Alabama.....	Tuscaloosa.....	February 28, 3 P.M....	Constructing, except elevators, Federal Building.....	James Knox Taylor, Wash., D. C.
Kansas.....	Winfield.....	March 1.....	Plans for \$80,000 Court House, jail and jailer's residence.....	County Board.
Michigan.....	Saginaw.....	March 1.....	Building 4-story, 110 x 180 ft. auditorium; cost, \$100,000.....	W. T. Cooper, 308 Hayden St., Arch.
Wisconsin.....	Madison.....	March 2, 10 A.M....	Constructing women's building; University of Wisconsin.....	M. E. McCaffrey, Act. Sec'y Univ.
Colorado.....	Colorado Springs.....	March 2, 3 P.M....	Constructing, complete, Federal Building.....	James Knox Taylor, Wash., D. C.
Wisconsin.....	Edgerton.....	March 2.....	Building \$40,000 Mem. high school; 2-story brick.....	Leonhouts & Guthrie, Milwaukee, Architects.
Indiana.....	Anderson.....	March 15.....	Erecting \$125,000 high school, R. P. Daggett & Co., Architects.....	J. D. Peary, Supt. School Bd.
Iowa.....	Des Moines.....	March 15.....	Erecting new City Hall, to cost about \$250,000.....	Proudfoot & Bird, Crocker Bldg., Architects.
Pennsylvania.....	New Castle.....	May 1.....	Erecting 3-story brick and stone high school, 200 x 190 ft., estimated cost, \$250,000.....	W. G. Echles, Lawrence, Tr. Bldg. Architect.

## Bridges

Pennsylvania.....	Kittaning.....	January 29, noon....	Alterations to bridges.....	B. J. Oswald, County Clerk.
New Jersey.....	Elizabeth.....	January 29, 3 P.M....	Strauss bascule lift bridge, 25 x 60 ft., clear.....	Jacob L. Bauer, County Eng'r.
Montana.....	Great Falls.....	January 30, 2 P.M....	Constructing 120 ft., two 75-ft. and 60-ft. steel truss bridges; 20-ft. rolled beam bridge; all with 16-ft. clear roadway, designed for live load of 1,600 lbs. to lin. ft.....	David M. Wood, County Clerk.

## Bridges Continued.

Minnesota.....	St. Peter.....	January 30, 8 P.M....	Labor and material for bridge, etc., over Spring Lake.....	Henry M. Benson, City Clerk.
New York.....	Buffalo.....	January 30.....	Bldg. foot bridge over Erie R. R. tracks, Alabama St.....	F. G. Ward, Com'r Pub. Works.
Ohio.....	Napoleon.....	January 30.....	Bldg. bridge sub and superstructure, between Henry and Wms. Counties.....	M. A. Sharp, Bryan, Des. Eng'r.
Ohio.....	Cincinnati.....	January 31, noon....	Constructing concrete bridge on Bank Lick road Colerain twp..	Fred Dreih, County Clerk.
British Col'bia..	Victoria.....	January 31.....	Erecting bridge, north arm of Fraser River.....	F. C. Gamble, Eng'r Pub. Wks.
Missouri.....	Old Monroe.....	February 1.....	Erecting bridge over Cuivre River, Charles Co.....	Lincoln County Com'rs.
New York.....	Le Roy.....	February 1.....	Plans, etc., for bridge over Oatka river, will pay \$250.....	Philo J. Sperry.
Pennsylvania.....	S. Bethelheim.....	February 1.....	Erecting Northampton Hts. iron bridge, 385 ft. long.....	R. E. Neumeyer, City Engineer.
Georgia.....	Savannah.....	February 3, noon....	Building steel highway drawbridge at Kings Ferry.....	G. Reuben Butler, Clk. Co. Com'rs.
Louisiana.....	Washington.....	February 3, noon....	Building steel bridge and earth approach, Bayou Canyon.....	A. J. Muller, Chm. Police Jury.
Mississippi.....	Greenville.....	February 3, noon....	Erecting splice bridge, over Granicus Bayou, 2d dist.....	W. W. Miller, Clk. Co. Superv.
Colorado.....	Silt.....	February 3, noon....	Bldg. 252-ft. steel span, with concrete abutments.....	T. W. Jaycox, Denver, State Eng'r.
Georgia.....	Statenville.....	February 3.....	Constructing steel bridge over Allapahaw river.....	J. W. Sawtell, Chm. Co. Com'rs.
Ohio.....	Troy.....	February 4, 10 A.M....	Bldg. bridges over Canal at Water St., Troy, & High St., Piqua.	E. E. Pearson, County Auditor.
Oregon.....	Grants Pass.....	February 5, 10 A.M....	Erecting steel bridge over Rogue River, 400 ft. long, 22 ft. wide.	Josephine County Court.
Georgia.....	Atlanta.....	February 5, 10 A.M....	Plans for ferro-concrete bridge over Peachtree Creek; 80 ft. wide, 60-ft. roadway; 2 walks, 10 ft. each; give estimates, etc.....	C. L. Anderson, Chm. Bd. Rds. & Rev.
Washington.....	Colfax.....	February 5, 2 P.M....	Constructing 9 new bridges; 4 of steel; 3 combination, 2 of wood	Whitman County Board.
Louisiana.....	Gretna.....	February 5.....	Repairing Metairie bridge over U. Protection Canal.....	M. A. Danenhauer, Sec'y Police Jury.
New York.....	New York.....	February 6, 2 P.M....	Bldg. additional girder supports for main towers Williamsburg or new East River bridge.....	J. W. Stevenson, Com'r Bridges.
Minnesota.....	Austin.....	February 7, 2 P.M....	Labor and material for all steel bridges ordered during 1908 in 10 towns, from 30 to 100 ft. long, including foundations, and cement floors; plans, etc., also.....	Geo. Robertson, Co. Auditor.
Virginia.....	Carterton.....	February 8.....	Plans, etc., for constructing iron bridge over Clinch River; 2 spans, about 200 ft. and 75 ft. approaches.....	Silas B. F. Counts, Sec'y Bd. Com'rs.
North Dakota.....	Grand Forks.....	February 11, 2 P.M....	Erecting all steel, also all wooden bridges to be built during 1908; bids by lin. ft.....	Hans Anderson, County Auditor.
Ohio.....	Cleveland.....	February 12, 11 A.M....	Erecting 3 concrete steel bridges, 2 townships.....	A. B. Lea, County Surveyor.
Missouri.....	St. Charles.....	February 13.....	Erecting Cuivre River bridge at Old Monroe cost \$8,000.....	County Commissioners.
Missouri.....	Huntsville.....	February 14.....	Bldg. sub. and superstructure of low truss bridge, capacity 1,200 lbs. per sq. ft.....	N. A. Matlock, Design Eng'r.
Louisiana.....	Alexandria.....	February 20.....	Steel span bridge, pile trestle approach.....	Ira W. Sylvester, Cons. Eng'r.
Mississippi.....	Gulfport.....	March 2.....	Bldg. drawbridge over river, near Morris's Ferry.....	F. S. Hewes, County Clerk.

## Lighting and Electricity

New York.....	Buffalo.....	January 30.....	Installing lights, etc., 3 bridges over Buffalo river.....	F. G. Ward, Com'r Pub. Works.
Massachusetts.....	Boston.....	January 30.....	Electrical work, extension to Francis Parkman School.....	B. B. Hatch, 120 Boylston St., Engr.
Louisiana.....	Lecompte.....	February 1.....	Constructing electric light plant, to cost about \$10,000.....	Baldwin Wood, New Orleans, Eng'r
Pennsylvania.....	Homestead.....	February 3, 7:30 P.M.	Lighting streets of borough for 1, 3 and 5 years.....	Andrew Hill, Boro. Clerk.
Pennsylvania.....	Tyrone.....	February 3.....	Street lighting for terms of 2 or 5 years.....	J. H. Harklerode, Boro Sec'y.
Indiana.....	Indianapolis.....	February 4, 10 A.M....	Installation direct current generator, dir. con. to steam unit (engine or turbine), foundations, steam connections, switchboard, etc., Cen. Inl. Hosp. for Insane.....	Bd. Trus. Cen. Hosp. for Insane.
Indiana.....	Goshen.....	February 6, 2 P.M....	Gas and electric light fixtures, dome Co. Court House.....	D. O. Batchelor, Co. Auditor.
Dist. of Col'bia..	Washington.....	February 6.....	Switchboards, exciter, etc., Ist. Canal Com'n.....	Col. H. F. Holges, Gen. Pur. Agt.
Washington.....	Seattle.....	February 8.....	Installing system of cluster lights on Third and Fourth Aves., Prefontaine Place.....	R. H. Thompson, City Engineer.
Wisconsin.....	Milwaukee.....	Feb. 13, 10:30 A.M....	Furn. & erecting on foundations of city, all machinery, etc., for complete gas-producer plant for city; plans, \$25.....	Chas. J. Poetsch, City Engineer.
Iowa.....	Ft. Des Moines.....	February 24.....	Electric wiring, fixtures, etc., 4 sets officers' quarters.....	Capt. J. J. Boniface, Q. M., U. S. A.
Georgia.....	Augusta.....	February 25.....	Furn. electric switchboard, motor, generator sets, motors, air compressor, pneumatic hammer, cranes, etc.....	Commanding Officer, Arsenal.
Louisiana.....	Lecompte.....	March 1.....	Constructing electric lighting plant.....	W. H. Jones, City Clerk.
Indiana.....	Mt. Vernon.....	April 1.....	Lighting streets for 10 yrs. from July 1, 1909 with electric lights, plant to consist of 85 2,000 c.p. enclosed arc lamps; 11 yr. franchise for commercial and residence lighting, 900 with contract.....	Henry Kling, City Clerk.
Georgia.....	Lafayette.....	May 1.....	Constructing electric lighting plant.....	J. A. Clements, City Recorder.

## Miscellaneous

Maryland.....	Baltimore.....	January 29, 11 A.M....	Furnishing 15 garbage carts.....	J. L. Wickes, Com'r St. Cleaning.
New York.....	Brooklyn.....	January 29.....	Dredging 5th St. basins in Gowanus Canal.....	Bird S. Coler, Boro. President.
Missouri.....	Kansas City.....	January 30, 11 A.M....	Planting white elm trees along several streets.....	E. A. Harper, City Engineer.
California.....	Los Angeles.....	January 30, noon....	Building submerged dam at pumping plant, N. H. D. V. S.....	T. J. Cochran, Treas. Soldiers' Home.
Michigan.....	Grand Rapids.....	January 30, 8 P.M....	Constructing dock line for flood protection, Gr. river.....	Chas. M. Wilson, Pres. Docks Board.
Illinois.....	Chicago.....	January 31, 10 A.M....	Furnishing 12,000 bbls. Portland cement, f.o.b. cars at works.....	U. S. Reclamation Service.
New York.....	New York.....	January 31, noon....	Furnishing gasoline motor truck, Bd. Educ'n.....	Ptk. Jones, Supt. School Sup.
Iowa.....	Emmetsburg.....	January 31, 1 P.M....	Furn. tile, also laying, etc., same; 7 drainage dists., 70 sections, 8 to 28-in. pipes in 3.5 to 9.5-ft. trenches; also stone or concrete bulkheads, etc.....	Sim. R. Steadman, Co. Auditor.
Minnesota.....	Minneapolis.....	January 31, 7:30 P.M.	Furnishing steam fire engine; also 8,000 ft. 2½-in., 2,000 ft. 3-in. fire hose.....	L. A. Lydiard, City Clerk.
Iowa.....	Des Moines.....	February 1, 10 A.M....	Furnishing hose wagon, capacity, 1,000 ft. 2½-in. hose; hook and ladder truck, roller bearings and rubber tires.....	Geo. F. Pormann, City Clerk.
Wisconsin.....	West Allis.....	February 1, noon....	Furnishing 1,000 ft. 4-ply seamless 2½-in. fire hose.....	F. Phillips, Jr., Chm. Bd. Pub. Wks.
Virginia.....	Portsmouth.....	February 1.....	Radial brick chimney for Naval Hosp., Spec. No. 1,572.....	R. C. Hollyday, Navy Dept., Washington, D. C.
Dist. of Col'bia..	Washington.....	February 3, 10:30 A.M.	Furnishing cable railways and duplex cableways.....	Col. H. F. Hodges, Ist. Can. Com.
Pennsylvania.....	Pittsburg.....	February 3, noon....	Furnishing 27,000 engineering stakes and hubs.....	F. P. Booth, County Controller.
California.....	Los Angeles.....	February 3, 2 P.M....	Labor and material for additional cell work county jail.....	C. G. Keyes, Co. Clerk.
Delaware.....	Port Du Pont.....	February 3.....	Furnishing one steam shovel.....	Capt. J. L. Knowlton, Q. M., U. S. A.
Pennsylvania.....	Erie.....	February 4, 3 P.M....	Constructing public steamboat landing 500 ft. long, 100 ft. wide, including dredging, timber, cribs filled with rock, filling between cribs, concrete walls and brick pavement.....	H. T. Leasure, Sec'y Erie Dock Com.
Kansas.....	Ft. Leavenworth.....	February 5, 11 A.M....	Furnishing rails, switches, and other railway supplies.....	Capt. J. E. Normoyle, Q. M.
Michigan.....	Grand Rapids.....	February 5, 3 P.M....	Constructing sheet pile revetment at Muskegon Harbor.....	Charles Keller, Major Eng'rs.
Indiana.....	Jeffersonville.....	February 5.....	Furn. iron, steel and mis. supplies for Manila, P. I.....	J. M. Marshall, A. Q. M. G., U. S. A.
Dist. of Col'bia..	Washington.....	February 6.....	Boiler room equipment, power plant, etc., Ist. Can. Com'n.....	Col. H. F. Hodges, Pur. Agt.
New Jersey.....	Orange.....	February 7, 8 P.M....	Repairing hook-and-ladder truck: furn. 5 new ladders, etc., and putting apparatus in first-class order.....	Geo. A. Martin, Pres. Fire Com'rs.
Pennsylvania.....	Pittsburg.....	February 10, noon....	Hauling ballast, etc., for Allegheny Co.; bids per ton.....	F. P. Booth, County Controller.
Alabama.....	Riverton.....	February 10.....	Exc. riprap, paving at Colbert Shoals Canal.....	Maj. Wm. H. Harpe, Nashville, Tenn.
Massachusetts.....	Fort Strong.....	February 10.....	Making repairs to wharf at Fort Strong.....	Capt. Ira L. Fredendall, Q. M. U. S. A.
Missouri.....	St. Louis.....	February 11, noon....	Furn. tools, labor, machinery and buildings for reduction of garbage for a term ending Sept. 1, 1918.....	W. B. Dryden, Sec'y Bd. Pub. Imp.
Ohio.....	Cleveland H'ts.....	February 11.....	Furn. 3 jumper hose reels, cap. 600 ft. 2½-in. fire hose; also 2,500 to 3,000 ft. 2½-in. double jacket fire hose and combination hook-and-ladder truck.....	Wm. G. Phare, Village Clerk.
Pennsylvania.....	Pittsburg.....	February 13, noon....	Furn. 275,000 ft. B. M. white oak plank and timber.....	F. P. Booth, County Controller.
Michigan.....	Muskegon.....	February 15, 10 A.M....	Furnishing 4,080 cu. yds. coarse crushed limestone, 2,985 cu. yds. medium 1,075 cu. yds. screenings.....	J. B. Barlow, Clk. Co. Rd. Com'rs.
Illinois.....	Rock Island.....	February 17, 2 P.M....	Bldg. and repairing dams and shore protection etc.....	C. S. Riche, Major Engrs., U. S. A.
New York.....	Albany.....	February 18.....	Work Contract 17, State Canal, on Mohawk river, left uncompleted by cancellation of contract.....	F. G. Stevens, Supt. St. B. P. W.
Missouri.....	Jefferson Bar'ks.....	February 18, 11 A.M....	Bldg. concrete platform at railroad track.....	O. W. Bell, O. M., U. S. A.
Ontario.....	Peterboro.....	March 12.....	Work on Sec. 3, Ontario-Rice Lake Div. Trent Canal.....	L. W. Jones, Ottawa, Sec'y D.R. & C.
New York.....	Buffalo.....	March 14.....	Bldg. 2 underground electric railways, etc.....	Argentine Legation, Wash. D. C.
South America.....	Buenos Ayres.....	May 1, 2 P.M....	Constructing concrete walls for ship lock.....	H. M. Adams, Eng'r Corps, U. S. A.



## STREET IMPROVEMENTS

**Argenta, Ark.**—Council and the Iron Mountain Railway have arranged to build viaduct at Seventh street; it is estimated that the viaduct will cost in the neighborhood of \$40,000; part of the expense is to be borne by the railroad in consideration of a promise on the part of the city authorities that they will not insist on a grade crossing between Fourth street and Tenth street; the viaduct will cross eighteen tracks.—Address City Clerk.

**Little Rock, Ark.**—Council is arranging to pave forty blocks with vitrified brick.—Address City Clerk.

**Oakland, Cal.**—Plans are being made by City Engineer Turner for paving Piedmont avenue, Grove street and other streets in the business section; resolutions of intention to improve a number of sidewalks have been adopted.

**Bridgeport, Conn.**—Council has directed estimates to be prepared for improving certain streets by paving.

**Washington, D. C.**—One of the American Consuls in Southern Europe announces that the municipal government of the city in question is in the market for wooden paving blocks, 2 3/4 inches by 3 15-16 inches by 8 5/8 inches. These blocks must be of the hardest and most durable wood, and be able to stand all conditions of weather without rotting or warping. A further description of these blocks may be had of the Bureau of Manufactures, and samples in conformity, with prices and terms, should be sent immediately. The Consul states that there is a special opportunity for the sale of these blocks if American dealers or manufacturers will act without delay.—Address No. 1852, Bureau of Manufactures.

**Atlanta, Ga.**—A mass meeting has been held to urge the paving of Decatur street.

**Dublin, Ga.**—Bonds, \$65,000, have been voted for street improvements.

**Cicero, Ill.**—Bids are invited for laying cement and cinder sidewalks, and wooden curbs in a number of streets.—L. O. Fitzpatrick, Secretary, Board of Local Improvements, Town of Cicero, Morton Park.

**Columbia City, Ind.**—Council has directed plans and specifications to be prepared for paving several streets with brick.

**Elkhart, Ind.**—City Surveyor A. M. Smith is preparing plans for construction of East Beardsley street viaduct; bids for construction will be asked.

**Indianapolis, Ind.**—City Engineer Blaine H. Miller reports to Council estimated cost of repairs to Virginia avenue viaduct at \$17,000.

Resolutions have been adopted by the Board of Public Works for resurfacing Senate avenue with asphalt, from Sixteenth to Twenty-first street; for pipe sewer in Roanoke street, from St. Clair street to point 98 feet south of Tenth street; for pipe sewer in alley east of Gale street, from Thirteenth street to point 535 feet north of Nowland avenue; for pipe sewer in Roache avenue, from Northwestern avenue to Annette street; for brick roadway and curb in St. Clair street, from Highland avenue to Big Four tracks; for resurfacing Senate avenue with asphalt, from Tenth to Sixteenth street; for resurfacing Meridian street with asphalt, from St. Clair to Sixteenth street; for resurfacing Meridian street with asphalt, from Vermont to St. Clair street; for graded roadway and walks in Barnes avenue, from Thirty-second to Thirty-third street; for brick roadway and curb in Columbia avenue, from Thirteenth to Sixteenth street; for brick roadway and curb in Lewis street, from Roosevelt avenue to Fifteenth street; for pipe sewer in Spring street, from Ohio to Walnut street.

**Portland, Ind.**—Bids will be received, January 30, for the purchase of \$10,000 street improvement bonds, maturing in the years 1911 to 1916, inclusive; interest 6 per cent.—Walter Hotsenpiller, Clerk.

**Davenport, Ia.**—The City Engineer has been directed to prepare plans and specifications for paving certain portions of Harrison street.—Address City Engineer.

**Des Moines, Ia.**—C. H. Carlidge, of the Chicago and Burlington Railway, has submitted to Council the detailed plans for the proposed West Seventh street viaduct, which is to cost \$227,862; the plans provide for a structure nearly one-third of a mile long; it will have a 34-foot roadway, which will accommodate a double street car track, and will extend from Elm to Tuttle streets; the main structure will be of reinforced concrete, with a roadway underneath; the two walks for pedestrians will be 16 feet wide, and are to be connected with the street by a cement stairway.

**Covington, Ky.**—Municipal improvements costing \$100,000 are to be made in this city during the coming summer; about a dozen streets have to be paved with brick, and the General Council also contemplates the completion of the Willow Run sewer; City Engineer Memers is preparing plans.

**Louisville, Ky.**—Councilman W. E. Booth

has introduced an ordinance for paving Fourth avenue with vitrified brick; it is also proposed to ask the Council to pave Fourth avenue to Seventh street.

**Opelousas, La.**—Bids will soon be asked by the Board of Aldermen for the construction of sidewalks; estimated cost, \$10,000.

**Lynn, Mass.**—Smooth paving will be extended on North Common street to Houghton Square, and on Franklin street as far as Lighthouse street; Essex street will be continued across Rogers avenue; Sea street and Broad street will be block paved.

**Bay City, Mich.**—A brick pavement on a Kahn system reinforced concrete will be laid for an approach to the Belinda street bridge.

**Meridian, Miss.**—The City Boards have ordered the sale of \$50,000 bonds for improvements to water service and \$50,000 for street paving work—25 per cent. of which is paid by the City.

**Joplin, Mo.**—The City Engineer has been instructed to prepare an estimate for paving Third street, from Kentucky avenue to Wall street, with vitrified brick.

**Moberly, Mo.**—S. McDonald, City Engineer, reports that it is proposed to pave certain streets with brick.—J. F. Curry, City Clerk.

**Bath, N. Y.**—The construction of a State road in the town is urged by Supervisor Peck. The road will extend from the eastern village limits on Morris street to the village of Savinu, about three miles; estimated cost, \$13,000.

**Watertown, N. Y.**—A resolution has been introduced in Council for the paving of a portion of Le Roy and Main streets. Medina paving blocks or vitrified brick with concrete base will be used.

**Goldsboro, N. C.**—Council is preparing to improve certain streets by paving.—Address City Engineer.

**Akron, O.**—Council has passed a resolution determining to proceed with improving of East Thornton street, from Main to Allen.

**Cambridge, O.**—The city and county officials are arranging to pave North Eighth street to North Wood cemetery, during the coming summer.

**Canton, O.**—City Engineer Sarber reports the total cost of paving North McKinley avenue from Third to Lake streets at \$32,565; the Cedar avenue grading and sidewalk improvement will cost \$20,000 and the engineer has been instructed to prepare plans for grading, curbing and constructing sidewalks on Smith avenue; the construction of a sanitary sewer on North Rex street has been referred to the engineer.

**Cincinnati, O.**—The Chief Engineer has been directed to prepare plans for improving Craig avenue from Montana avenue to Evergreen avenue with macadam. Motions for the improvement of the following streets have been submitted: Livingstone street, from Central avenue to Baymiller street, with granite; Hooker street, from Montana avenue to Broadwell avenue, with macadam; Boardwell avenue, from Glenmore avenue to Hooker street. A resolution has been reported favorably to have plans prepared for improving Wardall avenue from Boudinot avenue to its eastern terminus, with brick.

Resolutions "declaring it necessary to improve" were reported favorably from the Committee on Streets and Parks, and passed by Council as follows: Harrison avenue, from the end of the present asphalt improvement at Fischer's northwest line to the corporation line, with granite; also, Eighth street, from Lock street to Gilbert avenue, with boulders; also, Lang street, from Mulberry street to Seitz street, with boulders; also, Avery street, from Park street to its eastern terminus, with brick; also, Chestnut street, from Central avenue to Mound street, with asphalt.

**Cleveland, O.**—The citizens will probably vote, March 3, the issue of \$225,000 bonds for paving.—W. J. Springborn, President, Board of Public Service. Residents along the State Road have filed a petition with the County Commissioners asking that that highway be paved a distance of five miles between Parma and Royalton.

**Dayton, O.**—The extension of River street through the Winter Company plat, has been recommended to the County Commissioners by the viewers appointed to investigate the proposition. Engineer Klepinger will prepare an estimate as to the cost of the extension to the property owners affected.

Bids will soon be asked for the construction of the unfinished portion of curb and gutter on Keefer street.

An ordinance has been passed by the Council for improving Bacon street from Clinton to Detroit streets with new curb, and paving the roadway with brick, bituminous macadam, sheet asphalt, creosoted wooden block, plain macadam or broken stone; also Jackson street from Richard street to Burns avenue.

An ordinance has been passed authorizing an issue of \$18,500 street bonds. John N. Betscher, President City Council.

**East Liverpool, O.**—The appropriation or-

dinance calls for an expenditure of \$87,000; street improvements amounting to \$12,000 are to be constructed, and \$27,000 is to be applied to city water works; the Board of Health has petitioned for the employment of an expert engineer to draft plans for the construction of a sanitary sewer system.

Council will take up the question of paving Pennsylvania avenue at an early meeting; the question, however, of constructing sewers in this street before paving is commenced is under consideration; the material recommended for paving is vitrified brick.

**Elyria, O.**—It has been decided to expend \$40,000 for paving and \$10,000 in the Water Works Department early in the spring; Cleveland street, Lake avenue and East Fourth street are all to be paved.

**Lakewood, O.**—Bids will be received, February 17, for the purchase of \$14,330 Lake avenue improvement bonds; \$6,210 Lake avenue sewer bonds; \$11,925 Halsted street paving bonds; \$14,115 Cove avenue paving bonds; \$10,090 Plover street paving bonds; interest 5 per cent.—B. M. Cook, Clerk.

**Mansfield, O.**—Council has decided to have the city plans and estimates of cost prepared for sidewalks and sewers in Roland avenue, and for paving Marion avenue, Newville road, Third street and Chestnut street; also for paving First street with brick; estimates also on sidewalks and curbs in a number of other streets are to be prepared.

The Board of Public Works is preparing to advertise for bids for improving certain streets by paving; estimated cost, \$30,000.—Address Clerk of the Board.

**Marietta, O.**—Council has received petitions for paving half a dozen streets and the petitions are now in the hands of the Street Committee.

**Niles, O.**—The construction of a new roadway and sidewalks from Russia Field to the city is being considered.

**Portsmouth, O.**—The Board of Public Service has recommended the paving of Court, Ninth, Seventh, Market, Third, Jefferson, Twelfth, New Seventh and Campbell avenue; the Board has also recommended the appropriation of \$2,500 for the Water Works Commission to investigate the matter of securing a pure water system.

**Springfield, O.**—The Engineer is to prepare plans for curbing, paving and constructing gutters on half a dozen streets; Michael Bahin is the new City Engineer.

**Toledo, O.**—Council has been asked to repave Broadway and a number of streets in the central part of the city.

**Wapakoneta, O.**—The State will probably construct a cement walk for a distance of a mile or more around the grand reservoir near Celina.

**Shawnee, Okla.**—Council has passed a resolution authorizing the purchase of an asphalt plant, to cost about \$8,000.

**Altoona, Pa.**—City Engineer Engstrom is having plans prepared for approximately ten miles of new paving, and contracts will be let so that work can be started in the early spring.

**Charleston, S. C.**—The following improvements have been estimated by the Board of Public Works: Paving Bay street with granite blocks or vitrified brick, at a cost of \$8,500 or \$7,000; paving Calhoun street from Rutledge avenue to West Point gate, at a cost of \$5,200 for macadam or \$8,700 for vitrified brick; Ashley avenue from Bull to Broad with macadam, cost \$7,800; Prioleau street for three blocks, with granite, cost \$2,100; Water street, change of grade and repaving, cost \$2,900; Rutledge avenue from Spring to Cleveland, with brick, cost \$28,000, or with macadam, cost \$15,800; Rutledge avenue, shell road from Cleveland to city boundary, cost \$2,900; Morris street from King to Phillip street, with brick, cost \$2,400; Hayne street from Meeting to Church, with brick, cost \$2,926.

**Seattle, Wash.**—The following ordinances have been passed ordering street improvements: Utah street et al., plankings, \$12,000; alley in Block 14, Boreus Addition, brick paving, \$4,600; alley in Blocks 26-27, A. A. Denny, sandstone paving, \$4,400; West Sixty-fourth street, sewer, \$6,590; Twentieth avenue, Northeast, et al., grading, \$3,750; Thorndyke avenue, et al., grading, concrete walks and water mains, \$124,400; alley between Twentieth and Boreus Addition, vitrified brick, \$3,000; Prospect street, et al., concrete walks, \$14,900; Virginia street, asphalt paving, \$16,200; Bagley avenue, et al., grading, \$27,400.

R. H. Thomson, City Engineer, has reported the estimated cost of Fifteenth avenue, Northeast, et al., grading, as \$18,900, and Fourth avenue, South, grading, \$62,000.

**Fond du Lac, Wis.**—Council has decided to pave with brick a portion of Wisconsin avenue.

**Neeah, Wis.**—The Board of Public Works has accepted plans and specifications for paving certain streets; bids for the work will be asked at once.

## SEWERAGE

**Phoenix, Ariz.**—The City is considering purchasing present sewer system of Phoenix Sewer and Drainage Company.

**Pasadena, Cal.**—The issue of bonds for the East Side lateral sewer will be voted on February 20.

**Fort Morgan, Col.**—The Town Council contemplates having a sewerage system constructed, estimated to cost about \$70,000.—C. H. Meeker, of McCook, Neb., Engineer; G. R. Rickel, Town Clerk.

**Mullan, Idaho.**—Town Trustees have approved plans prepared by G. B. Phinney for sewer system; about 16,000 feet of sewers are to be constructed, at a cost of \$12,000; work is to be started in the spring.

**Carrollton, Ill.**—City proposes to install \$25,000 sewer system this year.

**Aurora, Ill.**—Construction of sewer system in Pigeon Hill section of city under consideration, as well as sewer extensions in the Third and Fourth Wards.

**Moline, Ill.**—Clark Anderson, City Engineer, has plans under way for sewerage the Sixth Ward; the cost about \$100,000.

**Quincy, Ill.**—The Board of Local Improvements has ordered plans and specifications prepared for the extension of the North End sanitary sewer system, about sixteen blocks, 2x3-foot egg shaped brick sewer, and about seventy-five blocks of pipe from 24 to 8-inch.—Fred L. Hancock, City Engineer.

**Fort Wayne, Ind.**—The Board of Public Works, H. W. Becker, City Clerk, will shortly receive bids for the construction of a sewer, commencing in Lakeside Park addition, to Baker avenue; sewer to be a 4-foot inside diameter, two-ring brick, or a reinforced concrete pipe.

**Kendallville, Ind.**—Plans are being prepared by W. G. Clark, C.E., Toledo, O., for proposed sewer extensions for this city.

**Kansas City, Kan.**—The estimated cost of enlarging and improving the drainage system of Kansas City is \$5,000,000, and time for completion five years from the time of commencement.

**Kingman, Kan.**—Committee, J. K. Sappington, Chairman, has been appointed to take steps for securing sewer system for this place.

**Louisville, Ky.**—The bid of Henry Bickel & Co. for the construction of section B of the intercepting sewer has been accepted, at \$3,800.

**New Orleans, La.**—The Sewerage and Water Board is preparing to improve sewers in the Algiers district.

**Covington, La.**—Plans are being drawn, and will be submitted to Town Council, for a sewer system.

**Ashfield, Mass.**—A sewer system is to be installed this year.

**Lynn, Mass.**—A sewer will be built in Lea street, from Commercial to Pleasant.

**Detroit, Mich.**—City Engineer McCormick has completed plans for the new sewer system in the former village of Fairview, and it is hoped to have work started in the spring; work includes the construction of a main sewer 7 to 9 feet in diameter, to cost \$100,000, and a pumping station, to cost \$60,000; in addition city will spend about \$100,000 for construction of sewers in the Eighteenth Ward.

**Ecorse, Mich.**—Plans for 28,000 lineal feet of sewers have been prepared; at recent Council meeting, proposition to build protection pier for sewer outlet was defeated.

**Grand Rapids, Mich.**—Two trunk sewers, to cost about \$300,000, are to be built this spring.—L. W. Anderson, City Engineer.

**Crookston, Minn.**—The County Drainage Board has decided to dig twenty miles of drains in Cass County the coming year.—Address County Auditor.

**Vicksburg, Miss.**—Preliminary plans have been completed for constructing complete sewer system, for which \$250,000 bonds were voted.—W. G. Kirkpatrick, Jackson, Miss., Consulting Engineer.

**Galena, Mo.**—An ordinance is before Council authorizing an issue of bonds for sewer construction.—Address City Clerk.

**Kansas City, Mo.**—The Board of Public Works is outlining preliminary plans for a new sewer system, which it is estimated will cost at least \$2,000,000; the plan desired is for duplicate systems, one for sewage and another for surface drainage and downspouts on houses, with a sewage disposal plant.

**East Rutherford, N. J.**—Bonds, \$50,000, have been voted for complete sewer system.

**Omaha, Neb.**—An ordinance is before Council providing for the extension of sewers in Hamilton street.—Address City Clerk.

**Gouverneur, N. Y.**—Construction of a sewer system and sewage disposal plant by this place has been advised by State Health Board.

**Herkimer, N. Y.**—This village is considering making sewer extension.—F. E. Hartigan, member Municipal Board.

**Syracuse, N. Y.**—Alderman John Davin, of the Fifth Ward, has taken the preliminary steps to secure for his ward a considerable amount of sewer construction; he has had the plans for an 8-inch pipe sewer in Wilson street changed to provide for a 12-inch sewer in that street, from Boyden avenue to Stuart avenue, and a 15-inch sewer from Stuart avenue to James street. In Peck avenue the proposed 10-inch pipe sewer is to be 12 inches in diameter from James street to George street, and 15 inches from George street to Teall avenue. The Cook avenue sewer, which was to have been built of 8-inch pipe, is to be 24 inches from James street to Melrose avenue. An 8-inch sewer proposed for Boyden street from Vine street to Wilson street is to be 12-inch. In Melrose avenue there will be built a 12-inch pipe sewer from Greenway avenue north, and a 24-inch sewer from Greenway avenue south to Cook avenue, instead of an 8-inch sewer, as planned. It is proposed to build a 20-inch sewer in Dillaye avenue.

**Burlington, N. C.**—Bids will be received, February 10, for the purchase of \$100,000 5 per cent., 30-year water and sewer bonds.—J. Montgomery, City Secretary.

**Wilmington, N. C.**—Council will soon offer for sale \$200,000 water and sewer bonds.—Address City Clerk.

**Akron, O.**—A resolution has been passed determining to proceed with the construction of a sewer in Warner street to Edgewood avenue.

**Athens, O.**—The City Engineer is preparing an estimate of the cost of installing a storm sewer to drain East Mill street.

**Canton, O.**—The City Engineer has been instructed to give an estimate of the cost and prepare plans for a sewer on the west side of the Public Square; the matter will be taken up by the County Commissioners.

**Carthage, O.**—A. Cowen, Engineer, has submitted a plan to the Village Council for the construction of a sewer system, estimated to cost about \$100,000; it has not yet been decided whether the system will consist of a combined sanitary and storm sewer or simply a storm sewer.

**Cincinnati, O.**—John W. Hill, former Chief Engineer of the Cincinnati Water Works, is seeking to interest the residents of Mill Creek Valley in a plan for a single sewerage system for Lockland, Hartwell, Wyoming and Carthage; he proposes to form a company to build such a system and contract for the disposal of sewage of the villages; the plan would include a reduction station; Mr. Hill resides in Wyoming, a suburb of this city.

Resolutions for sewer have been introduced and referred as follows: Grand avenue, from Lehman road to Glenway avenue; Austerlitz road between Warsaw avenue and Glenway avenue; an estimate has been ordered made for a sewer in Torrence road, Madison road and intersecting streets; an estimate has been ordered made for a trunk sewer in Harrison avenue.

**Cleveland, O.**—It is intended to devote \$725,000 for sewers, providing the proposed bond issue goes through; to complete the intercepting sewer from East Twelfth street to Gordon Park the Mayor asks \$50,000, and for main sewers \$225,000; the election may be called March 3.—W. J. Springborn, President, Board of Public Service.

**College Hill, O.**—The citizens have voted in favor of bonds for a sewerage system; the entire cost of the improvement will be about \$75,000, the village paying \$45,000 under the bond issue, and the abutting property owners \$30,000, which it is estimated will amount to about \$1 a front foot on the streets which will be sewered.

**East Liverpool, O.**—Council and the Board of Health both favor sewerage for the East End, and a sewer will probably be laid before the paving is put down.

**Minco Junction, O.**—Rudolph Kleybolte & Co., Cincinnati, have purchased \$50,000 5 per cent. sewer bonds for \$51,000.

**Niles, O.**—An appropriation providing for the purchase of 18 acres of land for a sewage disposal plant has been made.

**Orrville, O.**—The ordinance to issue bonds for the payment of the village portion of constructing a sewage disposal plant has passed Council; the bond issue is to be \$55,000.—S. W. Jackson, Village Clerk.

**Springfield, O.**—Property owners in Columbia street, between Race and Light, have petitioned for a sanitary sewer.

**Steubenville, O.**—\$50,000 worth of sewer bonds are to be sold for improvement of the sewer system.

**Muskogee, Okla.**—Council is considering starting work this spring on the construction of a storm sewer system.

**Ambler, Pa.**—State Health Department has advised that this borough construct a general sewer system.—John L. Shoemaker, President, Borough Council.

**Beaver, Pa.**—J. P. Leaf, Engineer of the Village of Monaca, has estimated that the cost of a sanitary sewer system for the

town will be about \$12,000; the question of a lighting and water works plant is also under consideration.

**Lancaster, Pa.**—The Sewer Commission has reported in favor of extended system, for which detailed plans will be made.

**New Castle, Pa.**—Council has decided to issue bonds for sewer purposes; the Fifth Ward storm sewer, which is designed to drain South Mill Street lake is to be built, and bids are to be advertised at once for this extensive improvement.

**Osborne, Pa.**—At the regular election February 18, the matter of issuing \$26,000 bonds for a sewerage system and disposal plant will be voted upon.

**Pittsburg, Pa.**—Residents of districts drained by Sawmill Run, a creek which winds through the valley beyond the Southside Hills and carries sewage and dumpings from 35,000 people of Montworth, Beltsaven, Mt. Washington, West Liberty and Elliott, and a considerable territory not within the city limits, are agitating for a 6-foot sewer, to cost about \$500,000, and Superintendent James F. Edwards, of the Bureau of Health, also favors it.

**Wilkes-Barre, Pa.**—The Joint Council Sewer Committee has reported that about \$300,000 will be needed for sewer construction in 1908; the largest item is for the Union street sewer, which it is estimated will cost about \$120,000.

**York City, Pa.**—In his annual message, Mayor McCall recommends that Council take up the matter of completing the sewer system.

**Yorkville, S. C.**—G. E. Shand, C.E., Columbia, will prepare plans for sewer system.

**Arlington, Tex.**—The Commercial Club has appointed a committee, of which W. M. Dugan is a member, to consider the matter of installing sewer system.

**Dallas, Tex.**—Mayor S. J. Hay is studying the subject of sewage purification; a proposition to issue bonds for disposing of sewage now emptied into Trinity river may be submitted to vote in April.

**Prairie View, Tex.**—All bids for installing sewer system for State buildings have been rejected, and new bids will probably be asked.—Walton Peteet, Dallas, Member of Building Committee.

**San Antonio, Tex.**—Committee of residents of Tobin Hill section, T. A. Wood, Chairman, have asked city to lay a sewer main 3,600 feet long to that vicinity.

**Janesville, Wis.**—The City Engineer is preparing plans for main sewer, estimated to cost \$75,000.—C. V. Kerch, City Engineer.

**Madison, Wis.**—Plans and specifications have been completed for the construction of sewers on Milton Park, in the Green Bush sewerage district.—O. S. Noraman, City Clerk.

## WATER SUPPLY

**Lanett, Ala.**—Council has appointed a committee to ascertain the cost of establishing a water system.—Address City Clerk.

**San Francisco, Cal.**—T. W. Ransome, Consulting Engineer, has prepared plans and specifications for the proposed salt water supply; the plans provide for three reservoirs, two pumping stations, 90 miles of pipe, two fresh water stations, etc; estimated cost, about \$5,250,000.

**Los Angeles, Cal.**—Within sixty days the Los Angeles Aqueduct Commission will let contracts for constructing aqueduct that will conduct the waters of the Owens river to Los Angeles; the Los Angeles Aqueduct Commission has made no decision as to whether bids for the entire work will be called for or if the contract will be let in sections; the grading and tunnel work will probably be done under the direct supervision of the Commissioners themselves.—W. B. Matthews, Attorney.

**Oakland, Cal.**—The Peoples' Water Company has submitted plans to the Board of Public Works for the construction of a reserve pumping station with a capacity of 3,000,000 gallons a day, at the foot of 24th avenue, East Oakland; estimated cost, \$7,500.

**Woodland, Cal.**—E. D. N. Lehr has applied to County Supervisors for water works franchise in Davis.

**Florida, Fla.**—The town is asking for bids for the installation of a water works system; estimated cost not to exceed \$20,000.—R. A. French, Mayor.

**Ashkum, Ill.**—The question of issuing bonds for water system will be submitted to a vote of the people.—Address City Clerk.

**Bloomington, Ill.**—City Engineer C. F. Fauntz estimates the cost of laying the 20-inch water main from the pumping station to the C. C. & St. L. Ry. at \$54,451.

**Quincy, Ill.**—The directors of the Citizens' Water Work Company are preparing to expend \$7,000 in extending water mains.—T. B. Pape, Director.

**Warsaw, Ill.**—This city is in a position to grant a franchise and bonus to any corpora-



tion which will install water works; Jesse M. Worthen, C. E., can furnish information.

**Andrews, Ind.**—The city is considering installing new water works.

**Michigan City, Ind.**—Superintendent Henry Schreiber has recommended the construction of a new 36-inch intake out into the lake.

**Rockport, Ind.**—The Rockport Electric Light and Water Works Company has been granted a ten years' franchise, and will let a contract for the construction of a new plant.

**Council Bluffs, Ia.**—The plans and specifications for a municipal water works plant, prepared by City Engineer Etnyre and amended and cut down so as to come near as possible within the amount the city can go into debt for such a purpose, were submitted to Council; estimates are as follows: Pumping station, \$111,500; settling basins, \$89,750; distribution basins, \$331,757; high pressure reservoir, \$24,130; relaying pavement, \$21,765; real estate, \$8,000; financing, \$80,000; total, \$616,902.

**Waterloo, Ia.**—Council is considering ways and means of improving water system.

**New Orleans, La.**—The executive committee of the Sewerage and Water Board has recommended acceptance of the bid of the International Pump Company for furnishing a 4,000,000 gallon pump for the station in Algiers.

**Fall River, Mass.**—The Water Board may have a reinforced-concrete reservoir constructed, in order to increase the storage capacity for use in case of emergency.—Philip D. Borden, City Engineer.

**Grand Rapids, Mich.**—The specifications for the proposed new 12,000,000 gallon pumping engine for the city water works were presented in the Board of Public Works, and in a general way the specifications called for a vertical, triple expansion engine; it was recommended that the specifications be referred to the City Attorney for his approval, and that the Board decide promptly which inspection bureau would be employed as inspectors in the work, so that the specifications could also be submitted to them for criticism in order to avoid possible future conflict; it was also recommended that they be submitted to some engineer of national reputation; the matter was referred to the original committee to carry out the recommendation before bids are advertised for.

**Swanville, Minn.**—Plans for water system are being prepared by Oscar Claussen, of St. Paul.

**Vicksburg, Miss.**—Council is preparing to expend \$20,000 in improving water supply in the Speeds addition.

**Plainfield, N. J.**—A report has been submitted to the Plainfield Water Commission on the cost of a municipal water works.

**Canandaigua, N. Y.**—The city contemplates having installed two 2,500,000-gallon gear power pumps, connected to a tandem compound Corliss engine. G. R. Ellis is Superintendent of Water Works.

**Orange, N. J.**—Council has passed an ordinance providing for the issuance of \$200,000 water improvement bonds.—Willett B. Gano, City Clerk.

**Cincinnati, O.**—An ordinance has passed Council for the appropriation of \$250,000 for constructing, improving and extending the water works.

**Cleveland, O.**—The expenditure of \$175,000 is authorized in water works ordinances recently introduced.

**Elyria, O.**—The Board of Public Service has taken up the question of the completion of the 16-inch trunk line water main through the city to be built under the jurisdiction of Superintendent George Weller, of the Water Department, who is to prepare plans for the improvement.

**Jefferson, O.**—Council has authorized the issuance of \$40,000 4½ per cent. bonds for constructing a water works plant; if these bonds sell, work will be started on the project just as soon as the money is in the treasury.—Address B. F. Perry for particulars.

**Orrville, O.**—L. E. Chapin, Engineer, of Canton, O., is making tests for the proposed water works plant; a duplex pump and boiler has already been purchased and another well is to be dug.

**Portsmouth, O.**—The Water Works Commission has set out to get a water works plant in this city during the coming year; Council has appropriated \$2,500 for the preliminary expenses of this improvement.—R. A. Bryan, City Engineer.

**Salem, O.**—The new Councilmanic body met recently for the purpose of discussing again the much-discussed water question; little, however, was done, as the committee appointed to look into the question during the first meeting had not yet got down to business.

**Lawton, Okla.**—Bids will soon be asked by Council for the construction of a water system for the Fifth Ward; estimated cost, \$25,000.

**Norman, Okla.**—An election will be held

Feb. 11 to vote on issuing \$45,000 of bonds for constructing water works.

**Charleston, S. C.**—The sub-committee of the Committee on Water Supply may recommend to Council that water mains in the northwestern section of the city be extended, and that a number of hydrants be placed along the new line.

**Dallas, Tex.**—The City Commission has set aside the sum of \$25,000 for the purchase of water pipe.

**Richmond, Va.**—Council has passed a resolution appropriating \$18,000 to repair the feeder wall at the settling basin.—C. E. Bolling, Superintendent of Water Works.

**Seattle, Wash.**—Ordinances have passed Council ordering laying of water mains in 23d avenue, N. W., cost, \$2,300; E. 65th street, et al., \$6,300, and 24th ave., N., et al., \$2,335, and hydrants in N. 49th street, et al., cost, \$725; also water mains, grading, etc., Thorn-dyke avenue, et al., cost, \$124,400; water mains, E. Olive street, et al., \$19,700; 15th ave., N. W., \$3,500.—R. H. Thomson, City Engineer.

**Montreal, Quebec, Can.**—The Water Committee will soon receive bids for the purchase of an 8,000,000-gallon pump.

## LIGHTING AND ELECTRICITY

**Phoenix, Ariz.**—A project to harness the waterfalls of Fossil creek, fifty miles from Prescott, is being financed in New York. One million five hundred dollars is involved; it is intended to generate electric power through a central station to the smaller towns and mining camps in Yavapai county. Engineer Manson, who was formerly Chief Electrical Engineer for the Huntington lines in Southern California, is now in Prescott arranging for the transfer of the title to all waters of Fossil creek, and rights of way for the transmission lines of the country; two generating plants are to be installed, one at the lower spring and one at the upper spring of the creek; the generating machinery will be 10,000 horsepower; steel towers forty-five feet high and 500 feet apart will support two circuits of three wires each, which will carry a voltage of 40,000, and the insulators will be fifteen inches in diameter.

**Little Rock, Ark.**—The municipal lighting plant will be removed to the new City Hall before January 1, 1909.

**Oroville, Cal.**—The Great Western Power Company has asked for a franchise to erect and operate a power line from the Big Bend plant through the country; the exact route has not been announced, but it will come in close proximity to Oroville, though of course not within the corporate limits of the city; this line will carry 100,000 volts, the cables being suspended on steel towers about 130 feet in height; the power will be carried through the Sacramento valley to the city.

**Pasadena, Cal.**—A special election will be held, February 20, to decide the question of issuing \$100,000 bonds for a municipal lighting plant.—S. J. Van Ornum, City Engineer.

**Lafayette, Ga.**—Plans will be prepared for electric light system, for which \$100,000 in bonds will be voted.—P. D. Fortune, Mayor.

**Macon, Ga.**—The Macon Railway and Light Company contemplates extensive improvements in its power house, including the installation of a 1,000-kw. generator to furnish electricity for lamps.—J. M. McFarland, Superintendent.

**Leroy, Ill.**—Council is considering a proposition to place 60-candle power lights on every corner in the city to take the place of the large arc lights, which up to a couple of months ago were in use in the city.

**Murphysboro, Ill.**—The Murphysboro Water Works, Electric and Gas Light Company is contemplating installing a 500-kw. alternating-current, 2,200-volt, 2-phase direct-connected unit.—W. O. Settle, Manager.

**Spring Valley, Ill.**—Both the Spring Valley Electric Light Company and the Spring Valley Gas Company presented contracts for the lighting of the city streets at the late Council meeting.

**Elkhart, Ind.**—The Indiana and Michigan Electric Company, owning a series of dams and power houses along the St. Joseph river will construct another power plant probably at Bristol.—F. B. Bryan, General Manager of the company.

**Mt. Vernon, Ind.**—Council will receive bids, April 1, for electric street lighting for 10 years, and will also grant 11-year franchise for private lighting.—Henry Kling, City Clerk.

**New Albany, Ind.**—Council has ordered a franchise prepared to be sold to the highest bidder to light the streets of the city.—L. T. Mann, City Engineer.

**Sheffield, Ia.**—Council is preparing to establish an electric plant.

**Laurel, Md.**—The Laurel Improvement Association has recommended that the Legislature be asked to authorize bonds for a sewerage system and for the purpose of having a better electric light system.

**Clinton, Mass.**—The Bigelow Carpet Company will improve plant by erecting and

equipping new power house; the new power plant will heat and light not only the new mill but the old weaving and spinning plants as well.

**Bay City, Mich.**—The following bids for machinery for the electric light plant have been recommended for acceptance: Allis-Chalmers Company, one 500-kw. turbine and generator, \$10,100; one expansion joint, \$250; one 15-kw. exciter, engine driven, \$1,025. Westinghouse Electric Manufacturing Company, lamps, rectifier and switchboard, \$13,865. J. Lang Electric Company, 5-panel switchboard, \$1,085. Arbuckle-Ryan Company, two 500-h.p. boilers, \$6,200; breeching, \$235. These bids aggregated \$37,760.

**Grand Rapids, Mich.**—The Welsbach Street Lighting Company, of Chicago, has submitted a proposal to light the city with the improved Welsbach boulevard gas system every night and all night, at \$21.84 a light; the system has been found satisfactory on Madison avenue; the Grand Rapids-Muskegon Power Company will also submit a bid; the matter will be considered at a joint meeting of the Board of Public Works and the Lighting Committee.

**Hudson, Mich.**—The electric light service is unsatisfactory.

**Minneapolis, Minn.**—The Minnesota Power Company, headquarters New York City, has advised the special committee of Council that it would enter the field against the General Electric Company, and that the rates demanded by the city would probably be acceptable.

**Arcadia, Mo.**—Louis Miller has purchased the plant of the Arcadia Creamery; he plans to enlarge the ice-making capacity and install electric lighting plant for Ironton and Arcadia.

**Omaha, Neb.**—The Nebraska Power Company has under consideration the project of developing water power from the Loup River; estimated cost, \$1,200,000.

**Sidney, Neb.**—The Sidney Electric Service Company has secured estimates for purchasing additional machinery.—W. M. Alexander, Superintendent.

**Las Cruces, N. M.**—The La Crosse Electric Light and Ice Company is preparing to purchase additional electric and power machinery.—B. L. Berkey, President.

**Edgely, N. D.**—Bonds have been voted to establish an electric light plant.—Address City Clerk.

**Cuyahoga Falls, O.**—W. C. Clapp, of the Board of Public Affairs, states that Council has been asked to rebuild the electric lighting plant at a cost of about \$60,000; \$6,000 for generators and \$7,000 for other items.

**Dayton, O.**—Engineer T. J. Pfeister, of Cincinnati, submitted his report to the Board of Safety concerning the proposition of placing underground the wires of the police and fire alarm systems.—Address Clerk of the Board.

**Perkins, Okla.**—An election has been called for February 3, to vote on the proposition of the city buying the electric light plant.

**McAdoo, Pa.**—The lease of the McAdoo municipal light plant to the Consumers' Light and Power Company, was consummated by the Town Council, to take effect February 1; the lease to exist for 25 years.

**Nashville, Tenn.**—Council proposes to expend \$100,000 in improving the city light plant.

**Ogden, Utah.**—C. Garff, of Logan, has submitted plans to Council for a municipal lighting plant; Mr. Garff says that the city can issue bonds in any amount up to \$400,000 for lighting purposes and will advise it should the city take hold of the proposition.

**Amherst, Wis.**—B. E. Dwinell & Co., owners of the electric light plant, propose to purchase additional equipment.

**Barron, Wis.**—Council proposes to purchase additional machinery for municipal lighting plant.

**Janesville, Wis.**—The County Board has passed a motion instructing the Purchasing Committee of the Board to look into the advisability and the cost of purchasing and installing a lighting plant in the jail to be owned by the County.

**Kewaunee, Wis.**—The citizens have voted bonds for municipal lighting plant.

**Milwaukee, Wis.**—The Committee on Judiciary has recommended that Council give the citizens another opportunity to vote on the question of establishment of an electric light plant. The cost of a suitable plant is now estimated to cost about \$1,000,000.

**Oconto Falls, Wis.**—The Oconto Falls Manufacturing Company will rebuild plant as soon as the insurance is adjusted; the manager has been instructed to obtain plans and specifications for the construction of a dam at a point below and within half a mile of the present dam; the erection of this dam, if decided upon, will give a fall of about ten feet; this power will be used to generate electricity, with which a large portion of the paper mill will be operated and the entire property of the company lighted.—A. C. Merryman, President.

**Plattsville, Wis.**—The Plattsville Electric

Light and Power Company will purchase additional machinery.—G. H. Kordenast, Manager.

**Sturgeon's Bay, Wis.**—Henry Fetzner, cashier of the Bank of Sturgeon's Bay, is at the head of a project to develop water power at Potato Rapids, to be submitted by cable across Green Bay, a distance of twenty-two miles.

**Saltillo, Mex.**—Alfred Lilliendahl and party of New York City arrived in Saltillo on business; Mr. Lilliendahl holds a valuable concession from the government for the establishment of an electric light and power plant.

**St. Paul (Boulevard), Que.**—L. J. Marchand, owner of the local electric light plant, contemplates adding a 150-KW. generator direct connected to a vertical condensing engine to his plant.—F. Sevigny is Superintendent.

## FIRE EQUIPMENT

**Alexander City, Ala.**—A fire company has been organized with A. J. Smith as Chief.

**Little Rock, Ark.**—Council is preparing to purchase additional fire alarm boxes and to build new engine house.

**Averyville, Ill.**—The Village Board is considering the matter of better fire protection. Address E. N. Kirkhoven.

**Rumford, Me.**—The fire protection in this place is insufficient, and improvements are to be made.

**Lansing, Mich.**—The matter of issuing \$21,000 fire protection bonds will be submitted to the voters at the May election.

**Watervliet, Mich.**—Council is arranging to establish a Fire Department.

**Duluth, Minn.**—The Fire Chief recommends the purchase of fire engine and 4,000 feet of hose for the West Side fire companies.

**Manchester, Minn.**—Council is organizing a Fire Department; it is proposed to purchase apparatus.

**St. Joseph, Mo.**—Bids have been rejected to supply the city with \$2,500 worth of fire hose; new bids will be received.

**Hampton Beach, N. H.**—A fire company is being organized.—L. C. Ring, Fire Chief.

**Trenton, N. J.**—The Board of Fire Commissioners recommends improving fire protection for the West district.

**Little Falls, N. Y.**—The Fire and Police Board is considering the question of establishing a bell fire alarm in place of the steam whistle now used.

The Fire and Police Board has decided to purchase from the Fabric Fire Hose Company 1,000 feet of hose at 95 cents a foot.

**Grand Forks, N. D.**—David Burk, Fire Chief, recommends the purchase of an additional fire engine.

**Jamestown, N. D.**—The Fire Chief has petitioned for hook and ladder truck and additional hose.

**Zanesville, O.**—The citizens of the Tenth Ward have petitioned for improving fire protection.

**Caldwell, Tex.**—Council proposes to build a fire house.

**Seattle, Wash.**—Council has passed ordinances appropriating \$50,000 for a central fire alarm system; \$2,100 for equipment of fire alarm system; \$1,500 for repairs on hook and ladder house No. 6; \$900 for a milling machine for the Fire Department, and \$500 for furnishings and fixtures for Engine House No. 8.

**Fond du Lac, Wis.**—An ordinance is before Council providing for the purchase of a modern combination hose and chemical engine.

**Merrill, Wis.**—The Fire Chief recommends improving water supply for fire protection.

**St. John (Carleton), N. B.**—Fire Chief Kerr recommends the purchase of an additional chemical engine and three additional chemical fire extinguishers.

## PUBLIC BUILDINGS

**Linville, Ala.**—The School Board will offer for sale \$8,000 20-year 5 per cent. school bonds.—Address Clerk of the Board.

**Mesa, Ariz.**—The erection of a high school costing about \$30,000 is under consideration.—J. D. Loper, Principal of Schools.

**Pomona, Cal.**—The details and specifications for the new school building on San Antonio avenue are under completion and bids will soon be called for for the construction of the building.

**San Jose, Cal.**—Bids will be received February 4 for the purchase of the 60,000 Oak Grove School district bonds; interest, 5 per cent.—Address Henry A. Pfister.

**Vallejo, Cal.**—City Engineer Noyes is preparing plans for the proposed new City Hall to be erected in conjunction with the branch county jail.

**Athens, Ga.**—Bonds, \$75,000, have been voted, of which \$50,000 will be for constructing new school buildings and \$25,000 for extension of the campus of the University of Georgia.

**Blue Island, Ill.**—Plans are being prepared by Architect H. W. Huehl, County Architect, 163 Randolph street, Chicago, for the erection of an infirmary building three miles southwest of Blue Island; cost, \$1,000,000.

**Chicago, Ill.**—Dwight H. Perkins, Architect, for the Board of Education, Tribune Building, is at work upon plans for a three-story addition and alteration in the Dante School at Desplaines, Ewing and Forquer streets; the new building will contain fifteen rooms, an assembly hall and a gymnasium and will cost \$175,000.

City Architect Charles F. Herman has just completed plans for a smallpox house, to be built on the grounds of the present institution, at Hamlin and Laundale avenues, Thirty-fourth and Thirty-fifth streets; cost, \$50,000.

**Gary, Ind.**—Architect William B. Ittner, Board of Education Building, St. Louis, Mo., has prepared plans for a two-story brick, fireproof school building, 170x300 feet, 24 rooms, for the Board of Education.—A. Wirt, Superintendent of Schools, Edward Jewell, Thomas H. Cutter and C. O. Holmes.

**Terre Haute, Ind.**—It is proposed to erect three schools at a cost of \$70,000.—Architect J. G. Vrydagh.

**Ann Arbor, Mich.**—Smith, Hinchman & Grills have been chosen architects for the new chemical building to be erected at Ann Arbor by the University of Michigan, James Angell, President; cost, \$275,000.

**Detroit, Mich.**—The Council Committee on Public Buildings is considering plans for the convention hall, which is to be erected at a cost of about \$350,000.

Louis Kamper, Fine Arts Building, has prepared plans for a new police station to be built at the corner of McClellan and Vincennes avenues.—Charles A. Nichols, secretary.

**Hattiesburg, Miss.**—The Forrest County Board proposes to issue \$40,000 5 per cent. county jail bonds.—T. E. Batson, Clerk.

**Hannibal, Mo.**—The Hannibal County Commissioners are preparing to issue bonds for building infirmary.—Address County Auditor.

**St. Louis, Mo.**—William B. Ittner, Architect, Board of Education, is preparing plans for a three-story, twenty-two-room school building, to cost \$160,000, and for a three-story school building for colored children, to cost \$150,000.

**Nebraska City, Neb.**—The proposition of issuing \$60,000 school bonds will be submitted to a vote of the people.

**Westfield, N. J.**—The erection of a school at a cost of \$45,000 is under consideration by the Board of Education.

**Carthage, N. C.**—Bids will be received February 10 for the purchase of \$10,000 6 per cent. school bonds, payable in thirty years; optional in twenty years.—C. S. Brewer, Town Clerk.

**Lumberton, N. C.**—Bids will be received February 17 for the purchase of \$50,000, thirty years, 5½ per cent., Robeson County Court House bonds.—C. J. Britt, Attorney for the Board.

**Cleveland, O.**—An ordinance authorizing the expenditure of \$125,000 for the new workhouse buildings at the city farm at Warrensville, has been introduced in Council. Plans are to be prepared by J. Milton Dyer, architect, and work will start early in the spring.

An ordinance providing funds for the erection of a \$54,000 dormitory and general dining room for the infirmary group was also introduced. There also were ordinances authorizing the equipment of an \$8,000 laundry, a kitchen and a \$6,500 artificial ice plant. A bakery will be equipped with funds set aside by ordinance introduced at recent meeting, and a generator costing \$6,500 will be purchased.

**Conneaut, O.**—Bids will be received February 3 for the purchase of \$70,000 4½ per cent. 21-year school bonds.—Address City Clerk.

**Johnstown, Pa.**—The citizens have voted \$100,000 bonds for the construction of school house.—Address James M. Walker.

**Manning, S. C.**—The Trustees of School District No. 9 propose to erect a \$30,000 school building.

**Rock Hill, S. C.**—The Trustees of Winthrop College have selected Edwards, Walter & Parham, of Atlanta, Ga., to prepare plans for school building, which is to cost about \$50,000.

**Winthrop, S. C.**—State Architect Edwards, formerly of Columbia, now of Atlanta, Ga., has been chosen to prepare plans for the new Winthrop Training School; cost, about \$50,000.

**Mitchell, S. D.**—A special election will be held to vote on the question of issuing \$59,000 bonds for the erection of schoolhouse.

**Wessington Springs, S. D.**—The School Board wishes sketches for a school building, brick, with stone facing, containing eight grade rooms and high school or assembly room, office, etc.—Miss Della England, Clerk.

**Amarillo, Tex.**—Bids will be received Feb-

ruary 10 for the purchase of \$50,000, 40 year, 5 per cent. school bonds, optional after 10 years.—R. B. Newcomb, Secretary.

**Dallas, Tex.**—Bonds, \$25,000, will be voted on in April for an industrial school.

**El Paso, Tex.**—El Paso County has voted \$28,000 bonds to build three-story brick addition to Court House.

**Graham, Tex.**—The Attorney General has approved an issue of \$18,000 school bonds.

**Walnut Springs, Tex.**—The Attorney General has approved an issue of \$14,500 school bonds.—Address Clerk of the Board.

**Newport News, Va.**—Council will be asked to petition the Legislature for authority to issue \$75,000 of bonds for the erection of a school building and probably for additions to the present school buildings.—W. E. Puckett, President School Board.

**Everett, Wash.**—The Board of Education has purchased the Whitney block for a high school to be built next summer at a cost of about \$120,000.

**Spokane, Wash.**—The Board of Education is considering the issue of \$250,000 bonds for school improvements.

**Bluefield, W. Va.**—An election will be held February 11 to vote on issue of \$150,000 school bonds.—W. J. Newenhan, President of the Board.

**Fond du Lac, Wis.**—A. D. Conover, of the State Board of Control, is stated to have submitted to the Board of Supervisors plans for two wings and improvements to be made to the County Asylum, which will cost, including plumbing and heating, about \$100,000.

**Oshkosh, Wis.**—The late Mrs. H. A. Beach, of Oshkosh, it is reported, has bequeathed to this city \$150,000 with which to erect a manual training school.

**Racine, Wis.**—Council has decided to add an eight-room extension to the Lincoln School, to cost about \$30,000.

## STREET RAILWAYS

**Willimantic, Conn.**—President is reported as being about to order the building of a trolley connection between Willimantic and South Coventry.

**Brunswick, Ga.**—The City and Suburban Railway Company will soon begin active work on its electric car line under the franchise granted F. D. M. Strachan and his associates several months ago; the work of making the necessary surveys of the line has been completed and the City Engineer has been furnished with a copy of the proposed route of the line; under the terms of the franchise granted by Council, the company has until January 1, 1909, in which to complete the line or in which to have at least four miles in active operation. The incorporators are F. D. M. Strachan, Frank D. Aiken, E. F. Coney, C. Downing, and A. Fendig, of this city, and George P. Walker, George F. Armstrong, and Harry D. Strachan of Savannah, and Ernest L. Simpson, 59 West Eighty-eighth street, and Lewis H. Spence, 320 West Seventy-fifth street, New York.

**Spirit Lake, Idaho.**—Machine shops, the erection and equipment of which will cost \$100,000, will be built by the Idaho & Washington Northern Railway Company at Spirit Lake Utah; the machinery will be of the most effective and advanced types of machine tools, which will be driven by electricity, separate motors to be provided for each; the electricity will be generated in the company's plant, which will be erected primarily for the purpose of supplying power to operate planing mill of the Panhandle sawmill, now in course of construction.

**Boyd's, Md.**—The survey for the Washington, Frederick and Gettysburg Railroad was halted last week. Residents of Seneca, noting that the survey was being made north of them a distance of four and a half miles, objected to it as not being a part of the programme. The result is the surveying corps has taken up the work to embrace Seneca.

**Columbus, Miss.**—Council has granted permission to the Columbus Railway Light and Power Company to lay a line of street car track on Military road; the new line will be about three miles in length and work will commence within thirty days.

**Valparaiso, Ind.**—The Winona Interurban Railway Company has completed surveys for the line between Valparaiso and Fort Wayne, Ind.—S. C. Dickey, General Manager, Warsaw.

**Kalamazoo, Mich.**—An extension will be built between Kalamazoo and Niles, Mich., by the Southern Michigan Railway Company; this company now operates the line connecting South Bend, Ind., and St. Joseph, Mo.—J. McM. Smith, General Manager, South Bend.

**Rochester, N. Y.**—Preliminary survey has been made for the proposed Rochester, Scottsville and Caledonia Electric Railway; it will run to Scottsville, Caledonia, Le Roy, Pavilion, Perry, Castile and Portage; with branches from Pavilion to Warsaw, twelve miles, and from Le Roy to Batavia, ten miles.



**Ravenna, O.**—The Cleveland Alliance and Mahoning Valley Railway Company expects to begin construction work in March or April on its line between Ravenna and Warren; in addition to electrifying the line from Ravenna to Newton Falls, which was purchased from the Baltimore and Ohio Railroad Company, nine miles of grading and tracklaying must be done; the railway will be in operation by September 1, 1908; when completed it will form the connecting link between the Northern Ohio Traction and Light Company line at Akron, Ohio, and the Mahoning and Shenango Railway and Light Company, at New Castle, Pa.—J. W. Holcomb, Cleveland, Promoter.

**Danville, Pa.**—John R. Nesbitt has offered the Danville and Bloomsburg Trolley Company proposition that the company extend its line from Danville to Milton, a distance of sixteen miles.

**Meadville, Pa.**—The farmers of Eastern Crawford County have taken the project of an electric railway to connect Meadville and Titusville into their own hands and have formed the Central Crawford Traction Company; the object is to build or secure the building of a road to connect with the Meadville Cambridge line at Long's Stand, four miles east of this city, and with the Titusville road at Clapville, a stretch of 20 miles.

**Pierre, S. D.**—The St. Paul, Minneapolis and Seattle Electric Railway Company has been incorporated with a capital stock of \$500,000,000, with headquarters at St. Paul; the line proposed to carry a branch from Fargo to Aberdeen.—William C. Webber, Rochester, Minn.; David Phillips, Mazeppa, Minn.; Samuel A. Phillips, James W. Mossop, St. Paul; Glen W. Martens, of Pierre, and others, Incorporators.

## BRIDGES

**Tucson, Ariz.**—Plans are being proposed for the construction of 300-foot county bridge. W. C. Goetz, City Surveyor.

**Los Angeles, Cal.**—Preliminary plans and specifications for the improvement of Alessandro street by constructing a retaining wall along the sides of the Baxter street cut of the Los Angeles Interurban Railway, and a bridge over the tracks at Baxter street, have been submitted to the Board of Public Works.—Homer Hamlin, City Engineer.

**Marysville, Cal.**—The Board of Supervisors has received a petition signed by fifty residents of Yuba County asking that a bridge be constructed across Little Dry Creek, one mile east of Brown's Valley; this particular crossing is considered extremely dangerous in the winter time, and it is quite likely that the Board will grant the request.

**Pasadena, Cal.**—A new Linda Vista bridge may be constructed across the Arroyo Seco, between Los Angeles and Pasadena; estimated cost, between \$5,000 and \$10,000. Noble, County Surveyor, has been instructed to prepare plans and specifications.

**Sacramento, Cal.**—The Northern Electric and the Vallejo Northern Companies have petitioned for franchises to place a railroad bridge across the Sacramento River.—L. T. Hatfield, Chairman of the Committee.

**Washington, D. C.**—The Senate has passed a bill introduced by Senator Daniel of Virginia, authorizing the construction of a memorial bridge, not to cost more than \$5,000,000, from the most convenient point of the former naval observatory grounds, or thereabouts, across the Potomac River to the Arlington estate; there was no discussion of the measure on the floor of the Senate, and no objection whatever was raised to its passage.

**Chicago, Ill.**—Commissioner of Public Works John Hanberg reports that plans for a number of new city bridges were completed and that bids for the work would be advertised for soon.

**Fairfield, Ia.**—The County Commissioners will have a bridge erected over Cedar Creek at Locke's Ford, eleven miles southeast of the city.

**Barbourville, Ky.**—Knox and Whitley Counties will unite in the construction of a modern steel bridge across the Cumberland River at Tye's Ferry; the bridge will cost \$15,000 and will connect the two counties at that point.

**Lexington, Ky.**—High Bridge, which spans the Kentucky River on the Queen and Crescent Railroad, twenty miles south of Lexington, is soon to be built at a cost of \$1,000,000; the contract for the work has not been let, but it is said that plans and specifications have been drawn and submitted to several construction companies; the railroad company will undertake the construction, but will let the contract to experts.—Address Wm. Doyle, Superintendent of Bridges, Somerset.

**Cumberland, Md.**—The Allegheny County Board is considering ways and means for building an interstate bridge across the Po-

tomac River; estimated cost, \$17,000.—John J. Stump, Secretary.

**Bemidji, Minn.**—Council has authorized the construction of a steel wagon bridge across the Mississippi River at the narrows between Lakes Living and Bemidji, at a cost not to exceed \$7,000, and providing that the question be submitted to the voters at the city election to be held February 18; it is the understanding that part of the cost of the proposed bridge will be borne by Bel-Trami County.

**Granite Falls, Minn.**—The Yellow Medicine County Board proposes to build a bridge across the Minnesota River at a cost of \$3,000.—Address County Auditor.

**Kansas City, Mo.**—The County Court has instructed the Surveyor to advertise for twenty days for bids on the construction of eight bridges and culverts in various parts of the county; the bids are to be filed with the County Clerk; among the improvements are a fifty-foot steel truss bridge over Mill Creek near W. N. Hudspeth's farm and one of the same size on the Lake City road.

**St. Louis, Mo.**—President A. J. O'Reilly, of the Board of Public Improvements, has decided to delay the date for receiving plans for free bridge until the topographical maps have been completed.

**Cleveland, O.**—A movement has been started to build a bridge from the foot of East Fifty-fourth street to East Fifty-fifth street, old South Wilson across Kingsbury run.—Address James V. Prosek.

**Pendleton, Ore.**—The Umatilla County Board has been petitioned to build an iron bridge at Athena.—Address County Auditor.

**Harrisburg, Pa.**—Council has passed an ordinance appropriating \$6,000 for building a concrete bridge at Hemlock street.

**El Paso, Tex.**—The business men have petitioned the County Commissioners for a bridge over the Rio Grande River above El Paso.

**Hearne, Tex.**—About 750 feet of the Hearne and Brazos Valley Railroad bridge spanning the Little Brazos River burned down; it will be rebuilt.

**Richmond, Tex.**—Plans and specifications are being drawn by Mr. Maxey for a steel bridge across the Colorado River at Rosenberg to be constructed by Fort Bend County; the bridge is to be two spans of the total length of 626 feet, and is to cost \$40,000; as soon as the plans are completed the contract will be let, as the County wants the bridge finished as soon as possible.

**Norfolk, Va.**—The Southern Branch Toll Bridge Company has been incorporated with \$5,000 capital to operate a toll bridge.—H. L. Page, President; W. R. Butcher, Secretary.

**Aberdeen, Wash.**—The Street Commissioner has been directed to have two bridges constructed on Market street, west of Division street.

**Concomully, Wash.**—The County Commissioners have definitely decided to construct a steel drawbridge across the river at the town of Okanogan; the bridge is to cost \$10,000, the town of Okanogan to contribute one-half the amount, and this has nearly all been subscribed and paid in and the work is to commence at once.—G. H. Wheeler, County Engineer.

**Janesville, Wis.**—Council and the officials of the Chicago and Northwestern Railway are considering plans for the proposed Center avenue bridge.

**Milwaukee, Wis.**—The ordinance providing for the issue of \$200,000 bonds for the bascule bridge at West Water street, has been approved by the Council Finance Committee; it is intended to build the bridge this year.—Peter J. Koehler, Deputy Comptroller.

**Nekoosa, Wis.**—Council is considering the matter of issuing bonds for building bridges across the Wisconsin River.—Address City Clerk.

**Toronto, Ont., Can.**—The Parks and Gardens Committee is considering the cost of building bridge at Bathurst street, at a cost of \$8,000.—Address City Engineer Rust.

**New Westminster, B. C.**—E. P. Moss, Consulting Engineer, has been authorized by Council to make the borings necessary for foundations for the Lulu Islands steel bridge.

**Vancouver, B. C.**—J. A. L. Waddell, 2708 Forrest avenue, Kansas City, Mo., has been engaged by the city to prepare plans for the construction of bridges across False Creek; the by-law to provide \$1,120,000 for bridges was voted on favorably by the ratepayers.—N. A. Clement, City Engineer.

## MISCELLANEOUS

**San Francisco, Cal.**—The Board of Supervisors has decided to print declaratory ordinance for a bond issue of \$35,000,000 for a fire-protection system, fire house, sewer system, repaving of streets, City Hall, schools, library, hospitals, Hall of Justice and jail, parks, play grounds, land near ferry for widening outlet of Montgomery avenue and a crematorium.

**Wilmington, Del.**—Council has authorized an issue of \$20,000 bonds for the purchase of park lands and \$5,000 for bath house; at the same time a new ordinance was placed before Council providing for a similar loan after it had been given the customary two readings.—Address Wm. P. White.

**Coeur d'Alene, Idaho.**—New bids will be asked for the purchase of \$40,000 city bonds.—Address City Clerk.

**New Orleans, La.**—An ordinance has been adopted granting permission to the Outdoor Art and Civic Improvement Association to convert Pile market place into a children's playground.

**Duluth, Minn.**—Fire Chief Black recommends that high potential wires be placed under ground.

**Cincinnati, O.**—The B. P. S. of the Village of Norwood is considering a \$6,000 bond issue to create a Street Cleaning Department.

**Cleveland, O.**—An ordinance setting aside \$2,400 for the purchase of a percolator for the garbage plant was passed under a suspension of the rules by Council, after President William J. Springborn, of the Board of Public Service, explained its use to the members of the body.

**Columbus, O.**—The Board of Public Service is still in favor of a reduction plant for garbage disposal, notwithstanding the failure to secure bids at a previous call, and will write at once to the leading reduction plant firms asking for suggestions amending plans so as to secure bids.

**East Liverpool, O.**—The Board of Health has asked Council to lay aside a suitable amount for the employment of a sanitary engineer to draw plans for the construction of a sanitary reduction plant; about \$2,000 will be used for this purpose.

**Martin's Ferry, O.**—The Board of Public Service will ask for bids for a garbage collector and will ask the successful bidder to give a bond for \$500 for the faithful performance of his contract; aside from this the Board will let the contract for two years so that the collector will know that the contract will not be open after the first year; the Board has the opportunity of improving on the system.

**Springfield, O.**—The ordinance appropriating \$18,000 for improving and dredging Buck Creek has passed Council; the contract is to be immediately awarded.

**Hugo, Okla.**—The question of establishing the legality of \$150,000 bonds recently voted by the people is, being considered.—Address City Clerk.

**Reading, Pa.**—The Water Board has decided to allow the Board of Park Commissioners of which George F. Baer is President, \$2,500 for improvements to be made at Mineral Springs Park.

**Scranton, Pa.**—Martin Maloney, the Philadelphia multi-millionaire gas magnate, has presented the city with a \$35,000 park, five acres in extent, adjoining the Home for Old People, just erected by Mr. Maloney; expert gardeners and landscape artists will transform the ground into a garden.

**Dallas, Tex.**—The Board of Municipal Commissioners has directed bids to be advertised for the purchase of \$650,000 city bonds.—Address City Clerk.

**Norfolk, Va.**—Mayor James G. Riddick has signed ordinance for the issue of \$30,000 city bonds to pay the Decarie Manufacturing Company for the new crematorium.

**Ottawa, Ont., Canada.**—The city will offer for sale \$500,000 bonds for public improvements.—Address Mayor Scott.

**Victoria, B. C.**—Bids are asked by W. A. Northcott, Purchasing Agent, for supplying the city with creosote in drums or barrels not exceeding in quantity 750 drums of 90 gallons each.

## BIDS RECEIVED

**Montgomery, Ala.**—The Memphis Asphalt and Paving Company has been awarded contract for paving South Hull street with asphalt at \$44,840.50, and the Southern Bitulithic Company for hexagon block sidewalks, granite curbing, and storm sewers, at \$12,898.

**Phoenix, Ariz.**—W. A. Rees, Fayetteville, Ark., has been awarded contract for laying cast-iron water pipe and setting valves and hydrants, at \$27,560.75. Other bids were: T. C. Brooks, Jackson, Mich., \$30,154.70; Jas. Stanley, San Francisco, \$31,636.24; Rogers & Spencer, Los Angeles, Cal., \$31,912.10; William Evans, Phoenix, \$32,805.35; Doyle & Schwartz, Colorado Springs, \$34,760.70; J. S. Penson, Williston, N. D., \$36,909.41; J. R. Gordon, Pueblo, Colo., \$37,407.10; Wm. Tunney, Joliet, Ill., \$37,571.05; H. G. Goelitz, Oak Park, Ill., \$38,068.70; F. G. Mortimer, Chicago, \$38,585; Geo. W. Sturtevant, Chicago, \$38,685.40; F. Prindle, Bisbee, Ariz., \$38,754; Bosler & Flynn, Chattanooga, Tenn., \$39,491.10; Toohey & Russell, Phoenix, \$40,270.40; F. E. Frey, Vallejo, Cal., \$40,055.20; N. S. Sherman Machinery Company, Okla.

homa City, \$43,024.70; O. C. Thompson, Phoenix, \$43,257; New Orleans Eng. Co., New Orleans, La., \$43,885.30; Tenney & Sinclair, Silver City, N. M., \$45,424.95; Geo. W. Craig, Omaha, Neb., \$48,443.70. The details of the low and successful bid follow: 10,560 feet 4-inch pipe, \$1,900.80; 73,300 feet 6-inch pipe, \$14,660; 10,420 feet 8-inch pipe, \$2,813.40; 11,690 feet 10-inch pipe, \$3,740.80; 550 feet 12-inch pipe, \$220; 5,560 feet 16-inch pipe, \$3,036; 5 4-inch valves, \$7.50; 85 6-inch valves, \$148.75; 14 8-inch valves, \$35; 24 10-inch valves, \$84; 3 12-inch valves, \$12; 6 16-inch valves, \$42; 49 4-inch hydrants, \$122.50; 55 6-inch hydrants, \$165. Fifteen connections, \$150; six concrete valve chambers for 16-inch valves, without cover, size 3x2½x4 feet, \$48; removing 1,500 feet of various sizes of old main, \$3.75.—Robert A. Craig, Superintendent of Water Works.

**Tucson, Ariz.**—The American Light and Water Company, New England Building, Kansas City, Mo., has been awarded contract for installing new pipe line for the Water Department for \$251,940.—Frank S. Treat, City Clerk.

**San Jose, Cal.**—Upon the recommendation of the Sewerage Committee contracts were awarded for the construction of sewers on Martel and Carlisle streets, from River to Pleasant, to Charles Wehner, and on Margaret street, from Third to Fifth, to S. F. Bennett.

Bids for the improvement of San Fernando street, from Market to Second streets, were received as follows and referred to the Street Committee:

Charles Wehner—1. Laying bitumen, including binder course, one inch thick within the railroad company's right of way, per square foot, 10.4 cents. 2. Bituminous pavement, no binder, per square foot, 9.9 cents. 5. Concrete gutter, per square foot, 19 cents. 6. Concrete foundation, 6 inches thick, per cubic yard, 8 cents. 7. Extra concrete, per cubic yard, \$5.75. 8. Removing basalt blocks, per square foot, 1¼ cents. 9. Removing old bitumen, per square foot, 1¼ cents. 10. Asphalt binder, per cubic yard, \$3.75.

Barber Asphalt Paving Company—No. 1. Laying asphalt, including binder course within railroad's right of way, per square foot, 14 cents. 3. Asphalt pavement, no binder, per square foot, 11 cents. 5. Concrete gutter, per square foot, 11 cents. 6. Concrete foundation, 6 inches thick, per square foot, 9 cents. 7. Extra concrete, per cubic yard, \$5. 8. Removing basalt blocks, per square foot, 1 cent. 9. Removing old bitumen, per square foot, 2 cents. 10. Binder, per cubic yard, \$9.

Clark & Henery—1. Asphalt, including binder course, 1 inch thick within railroad's right of way, per square foot, 10.7 cents. 3. Asphalt pavement, no binder, per square foot, 10 cents. 5. Concrete gutter, per square foot, 10 cents. 6. Concrete foundation, 6 inches thick, per square foot, 9 cents. 7. Extra concrete, per cubic yard, \$5. 8. Removing basalt blocks, per square foot, ½ cent. 9. Removing old bitumen, per square foot, 1 cent. 10. Binder course, per cubic yard, \$6.

**New Haven, Conn.**—The Board of Health has awarded garbage contracts as follows: Western District—A. N. Farnham, \$6,000; Natale Acunto, \$5,150. Eastern District—Robert D. Daley, \$5,000; John Mortell, \$4,500; Irving Blgelow, \$4,000. The collections last year were very satisfactory under the new contract rule.

**Washington, D. C.**—Bids for the collection of ashes from private residences were opened at the District Building, seven bids being received, the lowest being that of the Pollock Draying Company, \$69,544. The other bidders and their prices were: James W. Bean, \$71,254; George W. Kallan, \$74,500; George Hyman, \$71,075; Stutler & Ready, \$72,000; R. V. Rusk, \$77,000, and Fred L. Smith, \$72,700. The Commissioners have awarded to the Wise Granites Co., Wise, N. C., the contract for furnishing 12,000 feet of straight granite curbing at 99 cents per foot, and 1,500 feet of curved curbing at \$1.30.

Bids were received as follows for the construction of Sewers in the District: (A) R. J. Beall Construction Co., Washington; (B) E. G. Gummel, 300 Rhode Island avenue, N. W., Washington; (C) Warren F. Brenizer Co., Second and O streets, S. E., Washington. Ordinary excavation, (A) 83 cents per cubic yard; (B) 60 cents; (C) 78 cents; sewer brick masonry, (A) \$16; (B) \$14; (C) \$15; 15-in. diameter sewer pipe, (A) 97 cents; (B) 69 cents; (C) 92 cents; 12-inch pipe, (A) 85 cents; (B) 55 cents; (C) 80 cents; 10-in. pipe, (A) 80 cents; (B) 48 cents; (C) 65 cents.

**Jacksonville, Fla.**—Fort & Long were awarded contract at 84 cents per square yard for laying 17,600 square yards of macadam roadway, 12 feet wide, for a distance of 2½ miles; the bids including furnishing and placing in position about 26,400 linear feet of 2x8-inch curbing.

**Rock Island, Ill.**—The Davenport Water Company awarded the contract on January 13 for remodeling and enlarging its filter plant by constructing two new filters and reconstructing the present equipment, to

the New York Continental Jewell Filtration Co., 15 Broad street, New York City, at about \$30,000.

**Anderson, Ind.**—The following bids were opened on January 9 by the Board of Public Works for installing a 5,000,000-gallon reservoir at the water works plant: Canton-Hughes Pump Company, Canton, O. (four bids), \$18,990, \$16,990, \$15,490, \$12,990; William Todd, Youngstown, O. (four bids), \$17,650, \$17,150, \$14,625, \$13,825; Norberg Manufacturing Company, Milwaukee, Wis. (four bids), \$17,700, \$16,900, \$14,625, \$13,825; Allis-Chalmers Company, Milwaukee, Wis., \$16,570; Bethlehem Steel Company, Bethlehem, Pa. (two bids), \$12,650, \$12,100; Snow Steam Pump Company, New York, N. Y. (three bids), \$18,750, \$18,230, \$18,450; Henry R. Worthington, New York, N. Y., \$11,240; Laidlaw-Dunn-Gordon Company, New York, N. Y. (four bids), \$11,735, \$13,690, \$14,015, \$11,385; Epping-Carpenter Company, Pittsburg, Pa. (four bids), \$12,000, \$16,490, \$11,200, \$16,365; Fairbanks-Morse Company, Indianapolis (two bids), \$13,258, \$11,931.

**Alexandria, La.**—The bridge designed by Ira W. Sylvester, and to be erected under his supervision, was let by the County of Rapides to the Milwaukee Steel Construction Company, at \$3,888; the structure consists of three 56-foot Warren, Pony truss, riveted girders; 18-foot roadway, crossot steel floor joists and floor; weight of metal, 51,000 pounds; lumber, 14,000 feet; piling, 480 lineal feet; concrete in piers and abutments, 60 cubic yards. Other bids were received as follows: Missouri Bridge and Iron Company, \$4,253; Vincennes Bridge Company, \$4,522; J. K. Barcroft, \$4,725; Penn Bridge Company, \$4,787; E. P. Alsbury & Co., \$4,795; American Bridge Company, \$5,990.

**Baltimore, Md.**—The Board of Awards has awarded contract to the Consolidated Gas Company, Lexington and Liberty streets, to supply gas at the rate of \$7.25 a lamp a year and at the rate of 85 cents per 1,000 cubic feet for lighting public buildings; it is estimated that each lamp will consume 10,000 cubic feet a year. If it is found that more than this is consumed the city is to pay the company at the rate of 72½ cents per 1,000 cubic feet.—Douglas Burnett, Manager.

**Boston, Mass.**—The following bids were received, January 20, by the Charles River Basin Commission for the Boston Marginal conduit, section 6, Boston embankment, section 4; Jones & Meehan, \$69,054.50; W. H. Ellis, \$74,700.50; Coleman Brothers, \$84,592.50; Wm. L. Miller, \$87,054.50; Cavanagh Brothers, \$100,961.50; Charles R. Gow Company, \$106,044.50. Details of low bid of Jones & Meehan: Cofferdam at Fens Pond bridge, \$3,500, at gate chamber, \$5,500; at Boston marginal conduit, \$3,900; 12,000 cubic yards earth filling, Class C, ordinary earth, at 40 cents; 620 cubic yards, Class B, clean earth, at 50 cents; 5,300 cubic yards, Class C, sand and gravel, at 60 cents; 230 cubic yards earth excavation inside the cofferdams, at \$2; 34,000 lineal feet piles, in place, 45 feet or less in length, 20 cents; 2,000 lineal feet piles, in place, over 45 feet in length, at 25 cents; 6,100 lineal feet driving piles at an inclination, additional price, at 3 cents; 175 lineal feet drains, 80 cents; 1,760 cubic yards concrete masonry, 1:2½:4½, in conduits and gate chamber, and 720 cubic yards in wall and bridge, at \$10; 117 square yards granolithic surfacing, at \$2; 65 cubic yards ashlar masonry, except for copings, \$20; 95 cubic yards ashlar masonry for coping, at \$30; 80 cubic yards division stone masonry, at \$30; 4,500 square feet face dressing of pointed work, at 50 cents; 440 tons riprap, at \$3; 28.5 tons iron and tin riveted work, at \$25; 3 M. feet, B.M., timber attached to masonry, at \$25; temporary outlet from Stony Brook conduits, \$3,880.

**SUPERINTENDENTS**—Municipal, civil, stationary, hydraulic and heating engineers; landscape architects and designers; chemists; salaries, \$1,000 to \$5,000; positions, open all sections. Write Hapgoods, 305 Broadway, New York; or 1010 Hartford Bldg., Chicago.

**FOR SALE**—Button No. 2 Fire steamer, double action pumps, new suction hose, Siamese connections, nickel-plated jacket. City Clerk, Dowagiac, Mich.

**TYLER, Texas, wants to procure street cleaning apparatus.**  
Address Jno. H. Bonner, Mayor.

## Proposals

### STREET LIGHTING

Mt. Vernon, Ind., January 18, 1908.

Notice is hereby given that the Common Council of the City of Mt. Vernon, Indiana, will receive sealed proposals for the lighting of the streets of said city, for a term of ten (10) years, beginning July 1, 1909, with electric lights. Plant to consist of eighty-five (85) two thousand (2,000) candle-power inclosed arc lamps.

A franchise for commercial and residence lighting for eleven (11) years, fixing maximum rates, to be agreed upon, will go with the contract for street lighting.

Proposals to be opened April 1, 1908, and a bond in the sum of two thousand (2,000) dollars, payable to said city, shall accompany each bid, to insure the execution of contract.

The Common Council reserves the right to reject any and all proposals.

HENRY KLING,

(5, 6, 7)

City Clerk.

### STREET PAVING

Billings, Mont., November 7, 1907.

Sealed proposals for the paving with shale brick of certain streets of the City of Billings, Montana, described in the resolution creating Special Improvement District No. 21, will be received by the City Council up to 8 o'clock p. m. of February 4, 1908, addressed to the undersigned, and endorsed: "Proposals for Paving."

The work for which proposals are invited consists of, approximately, 6,305 square yards of shale brick pavement, the foundation for which is otherwise provided for.

Each proposal must be accompanied by a certified check for \$1,000 on some responsible bank in the City of Billings, and made payable to said city. The successful bidder must enter into an undertaking in the sum of \$2,000, with approved sureties. Plans and specifications are on file in this office.

The right is reserved to reject any and all bids.

J. D. MATHESON,

City Clerk.

### SANITARY SEWER SYSTEM

Tecumseh, Mich., January 8, 1908.

Sealed bids will be received by the Board of Trustees of the Village of Tecumseh, Michigan, at the Council Chamber, until 1 o'clock p. m. February 4, 1908, for furnishing all labor and material for building:

1,020 feet 15-inch pipe sewer.

500 feet 12-inch pipe sewer.

11,348 feet 10-inch pipe sewer.

28,227 feet 8-inch pipe sewer.

14,674 feet 6-inch pipe sewer.

Together with all necessary manholes, flush tanks, masonry and Y branches.

Bidding blanks and schedules will be furnished by the Corporation Clerk.

Plans and specifications may be seen at the office of the Clerk in Tecumseh.

A certified check on local bank for \$1,000 must accompany each bid as a guarantee of good faith.

A surety bond for \$25,000 will be required of the successful bidder.

The Board of Trustees reserve the right to reject any or all bids or to waive defects in bids in the interest of the village.

By order of the Board.

W. L. JONES,

Clerk.

### STANDPIPE

Marion, Mass., January 16, 1908.

The town of Marion, Mass., will receive proposals for furnishing materials and erecting a standpipe, 20 feet in diameter by 100 feet high, until 7 p. m. Monday, February 3, 1908. Specifications and blank forms for proposals can be obtained by intending bidders upon application to the Engineer at 101 Tremont street, Boston, Mass.

HARRY E. CONVERSE,

FRANK M. PATTEN,

GEO. N. DELANO,

Water Commissioners.

LOUIS E. HAWES,

Engineer.